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A study of factors influencing online cosmetics purchase intention in China's female Gen Z based on the RED

By Jianhui ZENG

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Student ID: H00067280
Advisor: Darrell Kofkin

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CERTIFICATION STATEMENT & ACKNOWLEDGMENTS

Hereby I commit that this paper constitutes my own product, that where the language of others is used, quotation marks so indicate, and that appropriate credit is given to the ideas, language, words, expressions or writings of others, where used.

Firstly, I want to express my great appreciation to Dr Darrell Kofkin, my advisor, who guided me through the dissertation journey during the difficult time impacted by the COVID-19 pandemic. Regardless of the mess and dangerousness, he continually provided insightful, timely, constructive and valuable feedback to me. He had devoted the precious efforts and time to guide me in the way toward the correct researching direction. Therefore, I would like to give my sincere thanks to him for his assistance, guidance and encouragement.

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Jianhui ZENG

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Abstract

This dissertation focused on evaluating the major factors influencing China's female Gen Zs' online purchasing decisions towards cosmetics, particularly via RED, the most famous CBOS platform in China.

In the critical literature review, several important factors had been sorted from different perspectives and paradigm like UGT, OBT, CBOS, online cosmetics purchasing as well as Chinese Gen Z characters. These factors were adopted and developed into a 30 close-ended questionnaires, which has been distributed in the online survey.

Totally 123 effective questionnaires had been feedbacked. The result had been analyzed with the support of IBM SPSS Statistics 26.

The EFA had been conducted with the PCA techniques, which extracted three qualified core common factors, including App content and design, UM and OBT. Followed by a multiple regress analysis, the relation between these factors and the Chinese female Gen Zs' online cosmetics purchasing intention has been evaluated. The 'App content and design' and 'OBT' factors respectively influenced the continuous purchasing intention and recommendation intention significantly, whilst the 'UM' factor influenced both mostly.

Based on the findings, recommendation and conclusion together with the research limitation had been made. Theoretically, the research enriched study related to China's female Gen Zs' purchasing intention towards online cosmetics. Practically, it encouraged the CBOS platform like RED to adopt different approachs in different regions by segmenting different customer-focus.

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1.0 Introduction

In this very first chapter, the research background, research questions, research objectives, chapters synopsis and conclusion had been outlined.

1.0 Introduction

This research aims to evaluate the factors influencing Chinese female Generation Z‘s online purchasing intention in cosmetic products on the RED. The author intends to reveal how online purchase intention may be affected by several critical factors.

Based upon the PEST (Political-EconomicSocial-Technological) paradigm (Ho, 2014), in political, 13th Five-Year Plan (2016–2020) of the Chinese government had set the goals, targets, main tasks and standards to boost the e-commerce; in economic, GDP of China in 2019 had reached 14.343 Trillion and contributed 11.81% to the global economy (Worldbank, 2020).

However, the development of China’s economy was unbalance – highly developed in the coastal area like Pearl River Delta Area / Yangtze River Delta Area whilst low in the North and West (Mok, 2019).

In social, China had 1.43 billion population in 2020, ranking the 1st globally (Worldometer, 2020). The huge population consolidated China’s NO.1 global makret size in many dimension, for instance, automotive, consumer market, etc. (Global Times, 2018). On the other hand, China has been regarded as typical high power distance, long-term oriented whisht low individualism and indulgence in culture, giving it unique characters in the cultural deposit (Hofstede insights, n.d.).

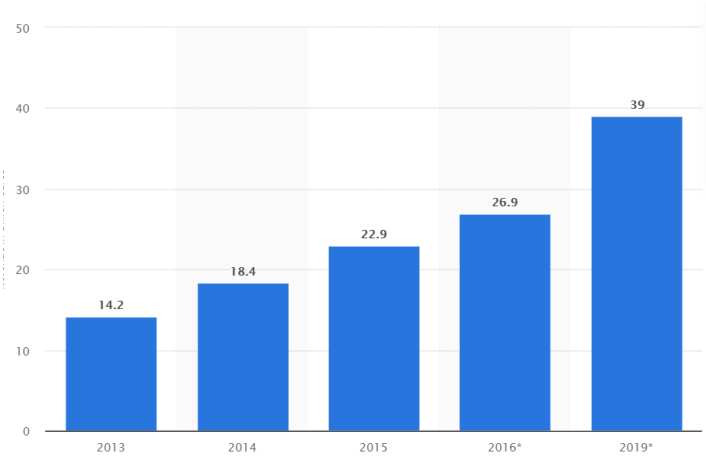
In technology, Xue & Yu (2017) found that in recent years, internet and social media

had not only fundamentally changed the individuals' lifestyles, but also facilitated the evolution of elements and characters of social groups, and most importantly, the entire social structure in China, for instance, from collective social remembrance (Zhao and Liu, 2015), human rights (Zeng, 2018), public healthy (Cheng, 2019), to business outcomes (Cao, 2018).

The total e-commerce sale worldwide revenue in 2016 reached approximately 1.859 trillion USD in 2016 (eMarketer, cited in Changchit, et al.,2019). The author himself had experienced the digital trend in the recent decade, which made him show great interest on the topic of digital consumer behaviour, including particular influencing factor during the online purchasing.

Figure 1 shows how global social media revenue increase in recent years, giving the potential valuable insight that may gain from this dissertation. A wide range of enterprise / NGOs / individuals that adopt social media as a business trigger in China may get benefit from the research by well understanding the influencing factor to the online purchasing intention.

Figure 1.1: Global revenue from social media from 2013 to 2019 (in B Euros)



(Source: Statista Research, 2019)

Among these new social media, the RED, also known as Little Red Book / Xiaohongshu, was established in 2003, and by July 2019 has been developed to a dynamic App - a lifestyle community platform with over 0.3 billion registered users, among which around 70% of the users were Gen Zs (post-90s).

It is found that every day around three billion impressions had been initiated on the RED via all kinds of media, such as short videos, photos and texts (Xiaohongshu, n.d.). The RED forecasts to achieve double its revenue to 2.9 billion RMB in 2020, among which major part may contribute from the cosmetics segment (Tiffany AP, 2019).

Cosmetic products refer to any substance / preparation which could be applied on the human body including teeth, skin, nails, hair, lips, or eyes to protect, perfume, beautify, coloure, cleanse, condition, preserve or even change the appearance (Spicoli, cited in L. I. M. Ying San, 2012).

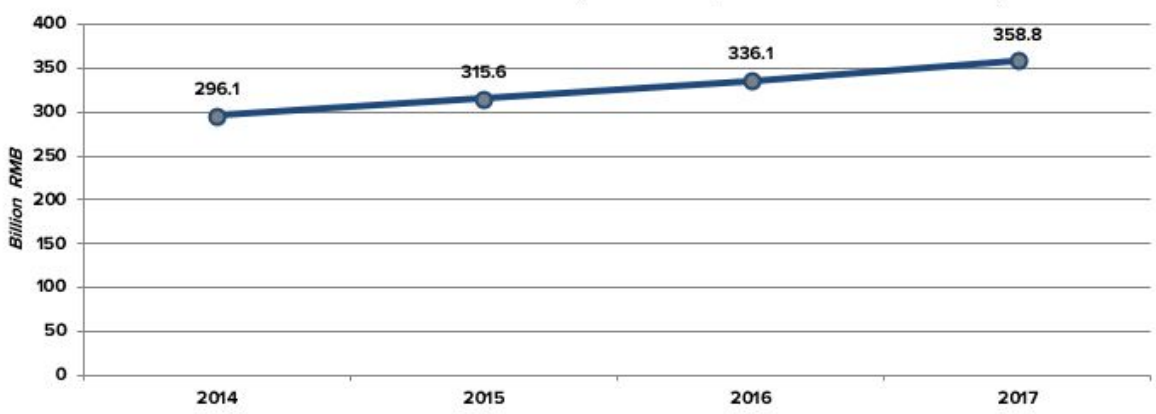
Nowadays, the worldwide cosmetics market total revenue has been estimated to reach 180 billion Euros, with an annual increase ratio of 4% (Alhedhaif, Lele & Kaifi, 2016). Together with the offline market, the online channel has gained popularity as a major distribution channel in cosmetic industry (Allied Market Research, cited in MCVMA Morais, 2017).

Specifically, the cosmetics industry in China has achieved 373.7 billion RMB in 2018 in market size, which had been steadily rising by 21% since 2014 (Qi, 2018 shown in Figure 2). At the same time, gradually the consumers shift their concerns from the sensitive price to product and service quality, green and natural material, which bring asignificant challenge to the industry (Zhao, and Thanabordeekij, 2016).

Regardless of the rapid growth and the No.1 global market ranking, it seems so far it

hasn't received enough focus of online cosmetics shopping motivation for Gen Z in China from the literature point of view (Shi, et al.,2019), for instance, which factors may mostly influence their purchasing motivation, etc.

Figure 1.2: Marketing size of cosmetics industry in China 2014 – 2017 (in B RMB)



(Source: Qi, 2018)

The author shows excellent personal interests in the cosmetics industry, with some personal connections in the field which may help to provide the necessary industrial information for reference. The study may offer some valuable solutions on e-commerce in the related field by addressing the theoretical gap accordingly. Thus, the current dissertation will put the research focus on studying influencing factors of the female Gen Z consumers in online cosmetics purchasing.

1.1 Background of the research

Numbers of quite successful B2C platform companies running CBOS have emerged in China, including AliExpress, the RED, Tmall Global, Yangmatou, Netease's Koala, etc. (PayPal Cross-Border Consumer Research, cited in Liang, *et al.*, 2019), which has gained interest from China domestic as well as oversea scholars in recent years.

Wang, Wang & Lee (2017) discovered CBOS platform like the RED could reduce the

transaction cost on China's International Trade from CBOS. Chen, *et al*. (2019) found the social shopping App, including the RED had been significantly influenced by the App location, App time and App-App types. Luo & Ye (2019) adopted the social capital theory to analyze how social capital increased loyalty to online shopping platforms, including the RED.

In particular, few scholars had taken the RED as the research target from a different perspective. Wang and Chen (2016) conducted a comprehensive introduction to the RED to track its rapid development, majorly from the viewpoint of sharing CBOS (cross border online shopping) and UGC (user generated content).

Lu and Long (2018) critically compared serval CBOS platforms - such as Jumei Premium, JD Golbal Purchase and Alibaba's Tmall International - with the RED, and found the RED exceled from competitors by its strength on eWOM and strong data support to costomize products, accurate consumption, and experiential promotions.

Moreover, Luo & Ye (2019) argued that in the SSW (social shopping website) the hedonic browsing experience may serve as the most salient factor to influence customers' intention to buy impulsively and continually by taking the RED as a typical example. Zhao *et al*. (2020) collected the data from a questionnaire survey to the RED users to analyze how eWOM influenced their buying intention.

However, as a matter of fact, at present, it is rare to find the related research specifically focusing on the influencing motivation factors on the online cosmetic purchasing in RED from the female Chinese Gen Zs. It may contribute to the academic paradigm as well as the business practice to address this gap by conducting deeper research.

1.2 Research questions

Online shopping motivations have been regarded as the great predictors of online purchase intention (MCVMA Morais, 2017). In this dissertation, the research question arises from the practices of the social media in China: What kind of factors influencing online purchase intention to China's Gen Z when they are purchasing cosmetic products on the RED?

The research question of this dissertation has been positioned as to explore the effect of online shopping motivations on online purchase intention.

1.3 Research objectives

To reveal the research questions, the dissertation aims at identifying the essential factors influencing China's Gen Z's online purchase intention when they purchase cosmetic goods at the RED.

Following research objectives would facilitate the achievement of the aim:

- To extract several major factors from several potential influencing factors;
- To determine the major critical factors that significantly influence female Gen Z's cosmetic online purchasing intention in China through the RED; and
- To propose references to the CBOS stations like the RED in terms of merchandising policy based on the analysis result.

1.4 Synopsis of the dissertation

This dissertation was separated into six chapters. The first chapter introduced the background of the study, followed by the research problems, the research objectives, research questions and assumptions.

Chapter two initiated the theoretical framework and basics of the research through

introducing some critical views of the existing literature theory and ideas related with the subjects of UGT (Use and Gratification), OBT (Online Brand Trust) and CBOS (Cross-Border Online Shopping). In the beginning, it analyzed an analysis in terms of which part of motivations (e.g., utilitarian or hedonic) may better explain the online cosmetics purchasing intention.

Furthermore, the dissertation also studies the effect of the hedonic and utilitarian motivations on the online purchase intention of cosmetical products, as well as which detail territory of these two different motivations' category, may bring the influence most to the online purchasing intentions.

As a determinant of purchase intention, the question raised from the practice called for the necessary to make a deep dive to explore the online motivations effort and the dimensions of online motivations that holds more influence towards the purchase intention. Therefore this chapter also presents the characters of online cosmetic marketing and the Gen Z in China, and identify several important variables influencing the female Gen Zs' online purchasing intention to the cosmetic products in China.

Chapter three described the researching design, researching methodology to conduct the quantitative data collection, together with a summary of the analysing principles associated with the phases to be adopted to secure the validity and reliability of the interpretations and data.

Chapter four presents the results gained from the explored research questions through the tests using SPSS. The EFA (Exploratory Factor Analysis) with the PCA (Principal Content Analysis) technique was first been conducted with the result of three common core factors extracted. It was followed by an MRA (Multiple

Regression Analysis) to test the relation between these factors and the Chinese female Gen Zs' online cosmetics purchasing intention.

Chapter five discusses the findings of the research, upon which the critical influencing factors to the purchasing motivation of cosmetical product in RED for Chinese female Gen Zs were revealed and emphasized. The chapter also presents answers to the research questions.

Chapter six makes a short summary of the research result by providing answers to the researching questions with an outline of the conclusion and recommendations. At the end of the dissertation, this chapter also highlights the weakness as well as the limitations associated with the research, followed by the suggestion to further research based on the reflection of the limitations.

1.5 Conclusion

In this chapter, the global e-commerce environment, the trend of the cosmetics online purchasing intention in China's CBOS platform like the RED, and the potential business growth related with the Gen Z have been discussed. The study contributed significant findings together with implications to theoretical research as well as practical strategies. This dissertation aims to analyze the relationship between several critical factors to online purchasing intention in the cosmetics industry.

The following chapter further addressed the related literature reviews that was relevant to the research topics highlighted above.

2.0 Literature Review

At the very beginning of the research, it is essential to have a look a what others had studied before, related to the interesting topics.

2.0 Introduction

In this chapter, the past and current literature related to the topic have been critically reviewed in the order of 1). The online purchasing intention analysis based upon the uses and gratification theory (UGT); 2). How the online brand trust (OBT) acted in a mediating way between the purchasing intention and the influencing factors? 3). The CBOS (Cross-board online shopping); 4). The online cosmetic market in China; and 5). The Gen Z, their characters and shopping behaviour in online shopping motivation.

The major intention of this chapter by reviewing these literature critically has been set to initiate a historical perspective, secondary research to present the key underlying themes, and furthermore a framework for this dissertation. The related previous journals as well as past researchs from secondary sources, had been assessed to discover the factors which may influence Chinese female Gen Zs‘ online cosmetic purchasing intention.

2.1 The uses and gratification theory (UGT)

2.1.1 Consumer decision making analysis

When people shops, for example, the cosmetics products, how the individual consumer chooses the best one from a set of permissible alternative commodities – the goods and service the consumer could afford? To answer this question from the field of microecnomics, it has been assumed that human beings rationally behave in

the attempt of satisfaction maximization which allows them to obtain via purchasing a particular combination of services and goods (Kolmar, 2017, p.145).

It's upon these behaviours the consumer theory has been developed. Further, the economists had developed two different approaches, namely the indifference curve / preference-based and utility function / choice-based approach to present the theory – the former uses the ordinal properties of utility / ranks the alternatives, whilst the latter obtains a utility feature by adhesiving several figures to each marketing segments (Mas-Colell, Whinston & Green, 1995, pp.3-39; Pindyck & Rubinfeld, 2017, p.127).

Both of the approach focuses on the utilitarian of the goods / service – the 'meaning' of the individual consumer, may gain by making a purchasing decision with the affordable cost.

The paradigm of UGT could be traced back to the middle of last centry. Since later 1970s, Scholar like Hirschman and Holbrook (1982) had observed the consumer behaviour of shopping motivation and debated that in tradition microeconomic the focus had been majorly put on the capabilities of goods / service to address consumers' utilitarian motives (namely the rational needs), whilst the hedonic motives or 'Hedonic Consumption' (the need for fun or exploration) also plays critical roles in much purchasing decision-making processes, representing fantasy, multisensory, and emotional aspects of consumers' interactions with products.

To combine these both sides together, the utilitarian and hedonic motives have been developed as the cornerstones of the "uses and gratification" perspective (Moschis, 2019, p.91).

2.1.2 Uses and gratification theory (UGT)

The paradigm has been employed for the stimuli explanation of the business world for a long time. First developed in the 1940s, the uses and gratification theory – also known as UGT, was araised initially for radio communication effectiveness research, by addressing the question of 'Why' and 'How' people look for media to satisfy their needs; later it achieved rapid involvement in communication theory (Katz *et al*., 1974, p. 20, cited in El-Deeb Sara and Hamed Sara, 2019).

It was originally applied in various conventional mass media, for instance, electronic bulletins as well as television, to analyze the associated behaviours and motivation of being engaged in various forms of media (Kujur and Singh, 2020).

Based upon the initiated theoretical development, Katz *et al.* (1974, p. 20, cited in El-Deeb Sara and Hamed Sara, 2019) first defined the concept of UGT. Evolved within the communications theory, Apaolaza et al. (2015) slightly revised the theory in the way that the media users tended to get involved in the active quest challenges which may address needs whilst supply gratifications covering the the utilitarian motives (UM) and hedonic motives (HM).

According to UGT, human beings may get involved into different activities related with the consumption for psychosocial needs satisfaction, for instance, the aversive states like boredom stress; it also supplies the background of motives derivation to get engaged into the different behaviours like shopping, exercising, and using the mass media (Moschis, 2019, p.91).

Solomon (2017) employs HM and UM to distinguish the purchasing motivation (the purchasing process that leads people to behave when an arousing need that calls for consumer's wish to satisfy) into two different part: the former as 'a demand to pursue

some practical or functional benefit', including objective, tangible attributes of products; whilst the later as 'an experiential demand, including subjective, fantasies or emotional responses' and thus 'rationality-based and task-related' (Wei, Wu *et al.*, 2018).

The paradigm mainly includes two dimesions. In particular, the UM includes (Chiu et al., 2014; Martin and Camarero, 2009):

- **Product offering**: the depth and breadth of the offered products;
- **Product information**: the useful information carried by the retailer;
- **Convenience**: the effort and time saved during the shopping procedure;
- **Cost and saving**: less spending and financial saving;
- **Security and privacy**: individual data protection and safe shopping environment.

The HM could be expanded in detail as:

- **Social experience**: people – esepecially from the undeveloped area / suburban / university campus - gather in the market place which may provide the social experience outside the home (Zimmerman and Stevens, 2005);
- **Status**: role-playing like dressing ritual turns to increase the shopping pleasure, which provides the opportunity for the individual to command respect and attention (Johnstone and Conroy, 2005);
- **Common interests sharing**: from human nature, people like to communicate and interact with others linking by the common interest associated with the specialized goods / serviced provided by the stores (Solomon, 2017, p.388); and
- **The Thrill of hunt**: some consumers enjoy the knowledge exchange / new products and trend learning / bargaining, etc.

With the history and concept reviewed above, the paradigm had played significant

role in the business world, which was illustrated next.

2.1.3 UGT applied on e-commerce analysis including online cosmetics business

In past decades, the UGT has been regarded as one of the widely accepted theoretical frameworks on the e-consume behaviour researches and thus popularly used on consumer purchasing intention evaluation.

The paradigm had been adopted into various industry. For instance, in clothing and fashion industry, Voss, Spangenberg and Grohmann (2003) raised the detail list of factors to measure the hedonic motives (HM) and utilitarian motives (UM); Most recently, Parker and Lu (2019) divided the online shopping motivation of Chinese fashion retail into hedonic (e.g., expedition / social gratification / role / value and mind) and utilitarian (efficiency and achievement).

Further, Jordi Pujadas-Hostench *et al*. (2019) employed information seeking as UM factors as well as the affection and social presence as HM factors to reveal the online purchasing intention through SNS to the clothing brand.

In the cosmetics industry, Wen, Li and Yin (2019a) found the major factors which influenced online purchasing intention towards the cosmetic product in Malaysia includes shopping enjoyment, site design, trust and perceived risk.

Wen, Li and Yin (2019b) also found the Chinese online cosmetics consumer were motivated more by the UM whilst the Korean the HM; UM like product variety (Alhedhaif, Lele & Kaifi,2016; Rani, Nazatul Shima Abdul and K. Sarojani Devi Krishnan, 2018; Thaveeporn Kijsaereekun, 2014), perceived risk (Baykal, 2017; Chen, Yang and Xiong, 2018; Wen, Li and Yin, 2019[a]), and HM like self-directed pleasure (Fenel and Vilic, 2014), emotional value (Jamal, 2019), web-shopping

attractiveness (May So W.C., Danny Wong T.N. and Sculli Domenic, 2005) had been widely found in the online cosmetics purchasing motivation research.

In luxuries industry, Navdeep *et al.* (2019) also selected aesthetic appreciation and entertainment factors to study the influence to the emotional needs (HM), factors of acquired, processes, and shared information to cognitive needs (UM) for analysis to an online luxury brand via social media.

Besides, El-Deeb Sara and Hamed Sara (2019) adopted the factors of commodity offers, commodity information, cost-saving, convenience, privacy & security for UM measuring, satisfaction, best deal, socializing, and thoughts for HM, along with the perceived risks (PR) to examine the online buying motivation.

Based upon the argument of Ducoffe's (1996) and Lin, Hsu, and Lin's (2017), Bela (2019) proposed the synthesized UGT and TAM (Technology Acceptance Model) to evaluate the young consumer's driving motivation of brand engagement on social media sites.

To compare with other consumption related paradigms, UGT shows great advantages below, which could serve as the ideal framework for the analysis in this dissertation.

- To explain the media usage in communication studies (El-Deeb Sara and Hamed Sara, 2019);
- It's been applied to the different context associated with the context of social media, e.g., the brand page in the SNS (Kujur and Singh, 2020).

Based on these logical concepts, targeting at analysing the influencing factors to online cosmetics purchase intention from China's young female consumers in the

RED, it seems the theoretical UGT framework fits the dissertation purpose well. Considering the range of the study, the first part of the survey questionnaire may be designed in the light of this framework, by adopting some common influencing factors like ‘information seeking’ in UM, and ‘entertainment’, ‘socializing’, ‘time passing’ in HM.

2.2 The online brand trust (OBT)

2.2.1 Brand trust

Trust has been regarded as the solely variant which thoroughly affects interpersonal as well as intergroup behaviour (Golembiewski and McConkie, cited in Kashif Javed, Ma and Qadeer, 2019).

From the evaluative aspect, the term of ‘trust’ was normed as the desires of the trustor which the trustee may conduct a specific action essential to her / him, at the meanwhile, the trustor wishes that the trustee may complete actions for her / his benefit (Doney and Cannon; Mayer *et al*., cited in Huaman-Ramirez and Merunka, 2019). Normally trust involves four factors, including:

- A trusting party and another trusted party;
- Hazard circumstance / uncertainty to yield a demand of trust;
- The consequence such as risk-taking actions; and
- The subjectivity (Wang and Emurian, cited in Bhandari and Rodgers, 2018).

Based upon these terms, brand trust is the anticipation which customers hold that a brand may consistently carry out its commitment (Huaman-Ramirez and Merunka, 2019).

It has been considered as one of the major focuses in consumer relationship that create a bridge between the consumer and the brand (Chang, Rhodes and Lok, 2013), or the driving power of a customer to be dependent on a brand due to anticipation which it may present its capability or may yield energetic results (Chaudhuri and Holbrook, cited in Frasquet, Molla Descals and Eugenia Ruiz-Molina, 2017). Gefen (cited in Bhandari and Rodgers, 2018) determined brand trust as a consumer's confidence, upon which a brand may behave expected.

So far, the scholars thought that brand trust was multidimensional (Kim, Kim and Lee, 2019) and have raised different tenets of brand trust. The brand trust has been classified into the institution-based dimension of customer trust, along with other two: character-based and process-based; whilst customer trust accept the specific person to adopt a status of defenselessness on account of positive anticipations of others' behaviour or intention (ÖCEL, and ARSLAN, 2019).

On the other hand, Kashif Javed, Ma and Qadeer (2019) defined three tenets in context of the consumer-brand relationship, which includes ability – namely brand expertise fulfilling consumers' needs, brand benevolence demonstrating goodwill toward consumers, and brand integrity following ethical and moral principles.

Huaman-Ramirez and Merunka (2019) only focus on the ability / competence (cognitive) – wether or not to hold its promises or stated function, and benevolence (affective) side – namely the positive intention or genuinely willingness to do good to

him / her; Johnson and Grayson (cited in Kim, Kim and Lee, 2019) also support the distinguish of cognitive (normed as people's desire / assurance to get involved into a service provider's competence and reliability) and affective trust (confidence on sentimental bonds on the circumstance of customer-brand relationship).

In early research, it's been found that the brand trust may be affected by product-level controls from both utilitarians like information / brand name / privacy / security and hedonic value like experience / WOM, at the meanwhile, providing significant effect to the purchasing loyalty and attitudinal loyalty (Chaudhuri and Holbrook, 2001; Ha & Hyphen; 2004).

Many studies have analyzed how brand trust works in the market. Chatterjee and Chaudhuri (cited in Pintado, *et al.*, 2017) found that those brands achieving the higher trust level may deliver better results in terms of the marketing share as well as marketing communicating efficiency, whilst that similar delivery got increased via an improved brand differentiation together with the consumers' voice improvement vs. rivals.

Kashif Javed, Ma and Qadeer (2019) pointed out that the brand trust drives the long-term positive, fruitful relationship between consumer-brand relationship, as well as the significant influence on the purchasing intention.

Given the importance of brand trust, the dissertation had adopted its modern online version as one of the analyzing tools.

2.2.2 Online Brand Trust (OBT)

When the times came to the era of the digit, the brand trust had been evolved into an online version – online brand trust (OBT), which was normed as the believing demand of the brand's intentions and reliability in the circumstance involving consumers related risk within a particular website (Delgado-Ballester, Muneura-Aleman & Yague- Guillen,2003; Ha, 2004; Shah Alam & Mohd Yasin, 2010 cited in Lim, 2016).

Yousafzai *et al*. (cited in Imran and Zillur, 2016) argued the OBT distinguished with the off-line brand trust due to the objective distance between the buyers and the sellers, absence of the salespersons and the isolation between commodities and purchasing.

On the one hand, OBT itself turns to serve as an important influencing factor on purchasing intention. For instance, OBT was found to be essential to evaluate in researches regarding e-commerce, and in some literature, the significant influence from trust towards purchasing intentions had been initiated (Wang and Emurian, cited in Bhandari and Rodgers, 2018).

On the other hand, the lack of trust may cause the core rejection to e-commerce (ÖCEL, and ARSLAN, 2019). Other authors also agreed that OBT was antecedents of online purchase intention by drawing theories like TAM – technology acceptance model, reason action theory, etc. (Pavlou, cited in Pintado, *et al.*, 2017).

Furthermore, it has been found that OBT tends to serve as the mediator within the online consumer behaviour. For instance, between product controls of hedonic / utilitarian values and purchase loyalty – the averaged demand from customers to

rebuy (Chaudhur and Holbrook, 2001); between eWOM and willing to buy (Chang, Rhodes, and Lok, 2013); between brand feedback and purchasing intention (Bhandari and Rodgers, 2018); between consumer–corporate identification and purchasing intentions (Kashif Javed, Ma and Qadeer, 2019).

In addition, some of the influencing factors come from a similar catalogue of the utilitarian and hedonic field, which was where the UGT theory emphasized (Chaudhuri and Holbrook, 2001), the mediating function seems obvious.

However, due to the limitation of the time and resource of this research, this dissertation will solely concentrate on the brand trust itself as one dimension of influencing factor to the online shopping motivation to the RED, with the lack of its mediating function for future study.

2.2.3 Online Brand Trust (OBT) and online cosmetics purchasing

So far, most of the scholars had put their focus mainly on how the cosmetics brand influenced consumers' online purchasing, rather than the shopping platform itself (e.g., Anjana, 2018; Fenel and Vilic, 2014). Besides, Alhedhaif, Lele & Kaifi (2016) identified the brand loyalty attract Saudi female consumers' attention mostly when they purchased online cosmetics goods; Hsu (2019) found brand authenticity played an important role when Facebook members in Taiwan made their online cosmetics purchasing decision.

There exists an academic absence on how the OBT of online purchasing platform like the RED itself, may influence consumers' cosmetics purchasing intention, rather than the cosmetics brands.

Based on above previous theories and consideration, this dissertation will take brand trust to evaluate the purchasing intension towards the cosmetic goods of the young females in the RED.

2.3 The CBOS (Cross-Border Online Shopping)

2.3.1 Introduction of CBOS

CBS (Cross-border shopping) was the commercial exchanges which occur within varied scenes – from out-of-town to out-of-country (Dmitrović and Vida, cited in Baek, Lee & Choo, 2019). However, CBS requries the physical travelling to search for the goods which may be more attractive than in their own countries in price, variety or quality, etc. (Evans et al.; Murphy; Ryan; Santos, cited in Baek, Lee & Choo, 2019).

The rapid globalization and e-commerce helped to overcome the barrier of the physical national board. CBOS (Cross-border online shopping) has been normed as the online shopping behavor of consumers shopping in online stores of other countries, which transfer commodities from other countries, in contrast to a foreign online retailer which is physically located in the shopper's domestic country (Wagner, Gerhard, Hanna Schramm-Klein, and Matthias Schu., 2016).

Over time, the consumers' CBOS has grown, in varied regions all over the world including EU, Asia and U.S.A. (Suchánek, 2010; Macik, 2017; Macik, 2018; Han, Kim & Lee, 2018; Okamoto, Yatsuhashi & Mizutani, 2019).

For instance, to reveal the country-level differences in online cross-border shopping regarding the European countries including 28 EU Member States and a few EU candidates as well as two members of European Economic Area (Macik, 2018); the

small volume of engagement from Polish consumers' shared values and attitude in terms of CBOS of Polish customers as well as e-commerce from the Internet stores located in Poland (Macik, 2017); young Japanese's acceptance of CBOS homepages, together with the connections within the factors related in e-shopping sites (Okamoto, Yatsuhashi & Mizutani, 2019).

The significant development of CBOS has attracted scholars' attention, including China.

2.3.2 CBOS in China

Over the past few years, stimulated by the rapid increase of Chinese economy, as one of the new modes of cross-border e-commerce transactions, the emergence of CBOS has satisfied the increasing consumers' needs for cross-border shopping in China (Yang, Shen & Yang, 2015).

It was found that the share ratio of Chinese cross-border online consumers vs. the general population of online consumers raised to 43% in 2017 from 25% in 2014 (Xiao, *et al.*, 2019). Today, China has become the global largest CBOS market, in both purchasing and destination side (Xiao, *et al*, 2019), resulted from the high disposable incomes and improved living standards (Baek, Lee & Choo, 2019). It has become more convenient for Chinese consumers to conduct CBOS in e-commerce websites (Yang, Shen & Yang, 2015).

Despite the ever-growing consumption behaviour within Chinese consumers, the limited papers show that the study regarding CBOS in China seems just began.

For example, the major characteristics of one of the particular type of Chinese CBOS – Daigou – the commercial-oriented agency living in Sweden upon which Chinese

consumers purchase foreign goods was indentifed, and the positive effect of country impression and perceived social value toward the customer satisfaction as well as perceived social value had been found (Jiang & Kungel, 2017).

Xiao, *et al*., (2019) determined four cues which significantly promote the Chinese consumption behaviour in CBOS, including personalized recommendation hints, content marketing hints, social review hints and e-promotion hints based upon stimulus-organism-response model and utilization paradigm.

Recently, the technology acceptance extension model had been adopted to analysis how personalized recommendation influence consumers' purchasing intention on CBOS through recommendation timing, information arrangement and perceived usefulness (GU, TIAN & ZHAO, 2019).

Also, Baek, Lee & Choo (2019) found the extent of 'telepresence' – namely the feeling of being transferred where the individual was physically located to a remote location – led to the positive online consumer behaviour via trust inside the retail as well as perceived product authenticity. However, the studies towards Chinese female Gen Zs' CBOS were still poor.

This dissertation pursues to contribute to the academic theory by analysing the motivation cues of Chinese consumers' purchasing intention on the CBOS.

2.3.3 Motivation of CBOS

To list up the major motivator cues found in the literature in recent years, it was notable that some of the cues had attracted scholars' particular attention which had been aprroved to play critical roles on consumers' CBOS purchasing intention, for

instance, “Personalized Recommendation” (Han, Kim & Lee, 2018; Xiao, *et al*, 2019; GU, TIAN & ZHAO, 2019), “Transaction Costs” (Cardona, Duch & Martens,2015; Macik, 2017) and “E-service quality” (Macik, 2017; Han, Kim & Lee, 2018). This research will take the three essential traits into account based on the background of the RED as a typical CBOS platform.

Regarding other cues which are also essential but already been considered in other section of this paper, including “Price” (Cardona, Duch & Martens, 2015; Macik, 2017), “Social Review” (Xiao, *et al.*, 2019), “Product Variety” (Cardona, Duch & Martens, 2015) and “Personal Information Protection” (Okamoto, Yatsuhashi & Mizutani, 2019), will be combined in other sections, other than representing in this section.

2.4 Online cosmetics market in China

2.4.1 Cosmetics market

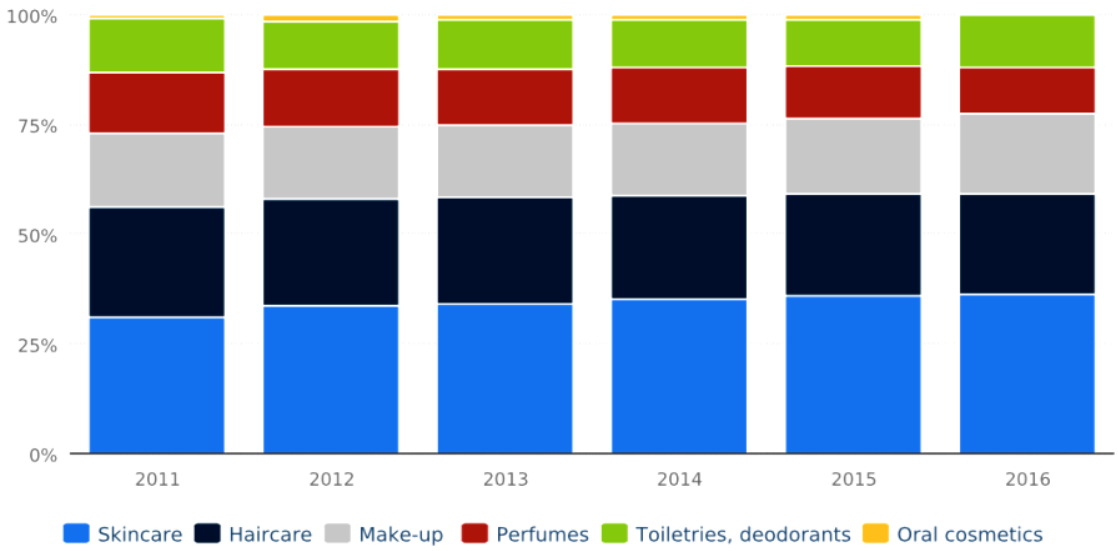
Today cosmetics customers turn to be more and more conscious regarding the application of cosmetics together with the essential impact it brings within their physical attributes and health (Allied Market Research; Joseph *et al.*, cited in MCVMA Morais, 2017). The industry of cosmetics, beauty and services is booming rapidly as consumers, particularly women, are putting more effort, time and money in order to look good (Al-Hashimi Mukhtar and Shaikha mubarak aldhari, 2019).

In 2012, the grand cosmetics market worldwide had been evaluated to reach 180 billion Euros; also it had increased stability in an annually 4% increasing ratio (Alhedhaif, Lele & Kaifi, 2016). The commercerelated with cosmetics was increasing significally. It had gained more and more attention from industrial vital players

globally, for instance, 13% annual increasing rate in Malaysia (Rani, Nazatul Shima Abdul and K. Sarojani Devi Krishnan, 2018; Jamal, 2019), Kingdom of Bahrain (Al-Hashimi Mukhtar and Shaikha mubarak aldhari, 2019), Thailand (Chaovalit Peerapatra, 2014), Saudi (Alhedhaif, Lele & Kaifi, 2016), and India (Anjana, 2018).

As shown in Figure 1, the cosmetics could be divided by the commodity segments into skincare, haircare, make-up, perfumes, toiletries and orals, among which skincare obtains No.1 market share and slightly keeps on increasing.

Figure 2.1: Global cosmetic market breakdown from 2011 to 2016 (by product)



(Source: L'Oréal. "Breakdown of The Cosmetic Market Worldwide from 2011 to 2016, by Product Category." Statista - The Statistics Portal. Direct link: www.statista.com/statistics/243967/breakdown-of-the-cosmetic-market-worldwide-by-productcategory/, Accessed 4 Sep 2017)

Due to more and more critical role that the cosmetic industry plays, scholars had put their attention in this field, particularly, to explore the motivating cues in purchasing cosmetical goods. Rani, Nazatul Shima Abdul and K. Sarojani Devi Krishnan（2018) found that in Malaysia, the skincare goods especially prefered by the Malay university students, were safe, Halal, in high-quality level and with trustable brands,

and the students even want to give more for those higher qualified cosmetics goods.

Besides, Chaovalit Peerapatra (2014) identified the positive relationship between Thai people's cosmetic good purchasing intention and traits of trustworthiness, expertise, attractiveness, reputation and persuasive capabilities; Al-Hashimi Mukhtar and Shaikha mubarak aldhari (2019) tried to examine the women's behaviour in Bahrain as consumers within Spa & Beauty industry and found that almost all the demographical aspects seem strongly connected with their purchasing intention except their educational level.

Besides, Alhedhaif, Lele & Kaifi (2016) observed that variables like product price, quality, name of the brand, features and design, the environment of the store, advertising and promotion, brought significant influence towards purchasing behaviour of Saudi's female customers; Similarly, Anjana (2018) identified five factors, including brand name, quality of goods, selling price, name of the brand, advertising and the package of product brought critical influence on India's female customers' buying decision.

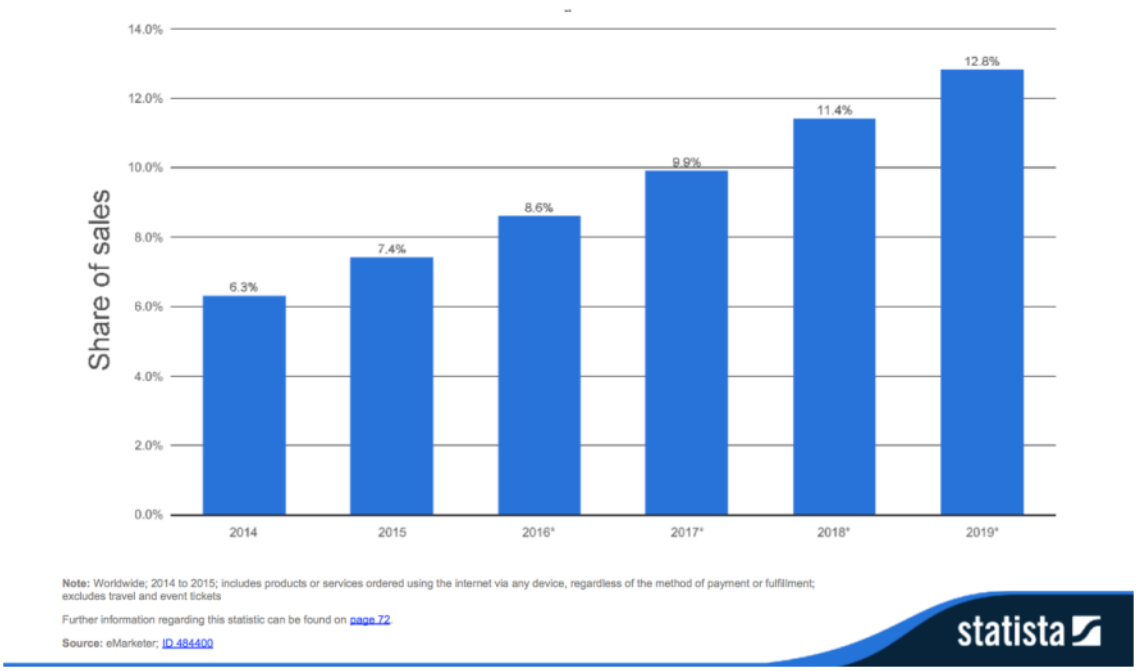
On the contrary with the previous study, Jamal (2019) however found the impact from product quality, the original country, as well as brand impression, was very weak whilst the emotional value is significant to purchasing intention among Malaysian Millennials.

2.4.2 Online Cosmetics market

The online market could be defined as the e-commerce for trading business to consumer goods (Fenel and Vilic, 2014). Nowadays, besides the off-line stores, online channels are gaining popularity as a major distribution channel (Allied Market Research, cited in MCVMA Morais, 2017), at the same time online marketing has

been regarded as one of the essential commercial strategies associated with a company like cosmetics manufacture, which was indicated by the trend shown on Figure 2.

Figure 2.2: Share of e-commerce regarding total global retail revenue in 2016 (by Region)



(Source: "Ecommerce Share of Total Global Retail Sales in 2016, by Region." Statista - The Statistics Portal.

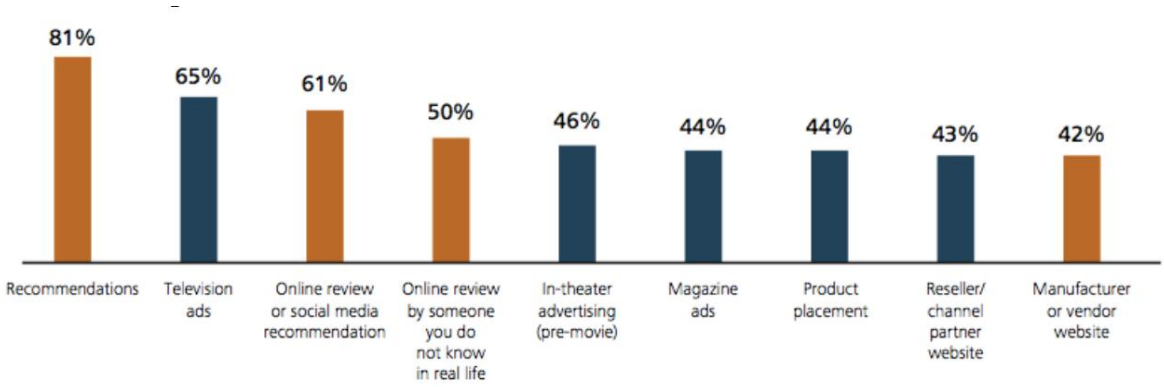
Direct link: www.statista.com/statistics/239300/number-of-online-buyers-in-selected-countries/,

Accessed 16 June 2020)

For instance, ZMOT (The zero moment of truth), namely the timing during the purchasing loop at the moment the customer approaches particular good, generally in advance of the vendor's awareness of their existence; at the same time, the digital waves maintain the vital character in the individual's scene which is associated with the customer journey to decide within the services or product purchasing phase (Ngamjarussrivichai, Jeemali and Panitsettakorn, 2018).

It has been found that several critical motivation exists on the consumers' online cosmetical purchasing, as Figure 3 shows. Among those recommendations, TV ads and online review of social media rank in the top three (Baykal, 2017).

Figure 2.3: Influence on online purchasing decision



(Source: Paul, K. Alison and Hogan, K. Susan; 2015.

"On the Couch - Understanding consumer shopping behaviour". Deloitte University Press)

Fenel and Vilic (2014) raised the concept of 'luxperience' to describe the critical motivation on the luxury cosmetic brand online shopping in U.S., including components of brand coherence, visual stimulation and personal experience; Bartosik-Purgat (2018) evaluated the significance of the information obtained and SNSs, typically the release of new products in making cosmetical goods purchasing decision within China, Poland and U.S. consumers.

Sang (2018) also argues that social media is the main contributing factor influencing students to purchase online in Kuching area, Malaysia, other than other cues like privacy, convenience, online banking, website credibility and price; Hsu (2019) found that consumers' cosmetical online brand purchasing motivation was affected by the brand identification and brand authenticity via brand passion and brand trust in Taiwan.

Baykal (2017) argued that thanks to the social media channels, the cosmetics market developed quickly, e.g., the social platforms like YouTube together with Instagram created great needs for beauty commodities; also the connection between

consumers and the brands via interphase like vloggers were more and more significant.

Thaveeporn Kijsaereekun (2014) further confirmed the positive relationship between geographic factors, attitude and marketing mix and the online cosmetics purchasing intention in Thailand females through qualitative and quantitative research; MCVMA Morais (2017) adopted the UGT framework to invest the motivation of Portugal consumers' online cosmetical purchasing with the result focused on UM including information seeking, economic value and convenience.

2.4.3 Online Cosmetics market in China

In 2016, the size of e-commerce market was 2.6 trillion RMB (≈USD 0.41 trillion) in the U.S., in contrast, online retail revenue approached 4.7 trillion RMB (≈USD 0.74 trillion) in China, almost doubling the size of retailing sales in the U.S.A. (IResearch, cited in Shi, *et al.*, 2019). Nowadays, China's online market has been ranked the largest globally (Tian, 2018; McKinsey & Company, cited in Shi, *et al.*, 2019).

Together with China's swift growth in economic, the market of cosmetic has become one of the most important parts of consumer markets (Zhao and Thanabordeekij, 2016). It is said that more than 30 million, which is about 8.3% of the total Netizen are cosmetic users (Li, 2010).

Under this background, in recent years, it is normal that many scholars conducted interesting related research. Li (2010) found that the online cosmetic priee significantly influences Chinese consumers' online cosmetic purchasing, which is determined by brand, product and e-tailor's characteristics; Cui (2014) adopted the qualitative research method to investigate the strong connection among involvement

from the consumer in social media and young customers' buying intention toward cosmetic goods in China.

Moreover, Zhao and Thanabordeekij (2016) tried to recover the variables affecting customers' buying intention toward Thai cosmetics products on China's online market, under the traditional marketing 4Cs paradigm – marketing communication / web atmosphere, customer value and benefit and convenience have a significant relationship, whilst the cost / price has not, due to the reason of negative perception of product quality; Xu-Priour, Cliquet and Palmer (2017) identified several critical factors including trust, social interactions during Chinese consumers' cosmetic shopping online.

Regardless of the above previous study, the P.R.C, whose e-retailing market ranks first level all over the world, hasn't yet received enough concentration of online cosmetics shopping motivation for Gen Z (Shi, *et al.*,2019). This dissertation will try to address the gap.

2.4.4 Related motivations

In summarize, the primary prior literature in recent years concerning the topics of online cosmetic purchasing. It is interesting that some of the cues which frequently arose have been cited in another part of this paper – for instance, price and social interaction in UGT, quality in CBOS, and brand in OBT section.

Rather than repeating those cues, this section will emphasise on other cues strongly connected with online cosmetic purchasing intention, including 'Products', 'Store Environment/ Place / visual stimulation' and 'Personal Experience'.

2.5 The Gen Z

2.5.1 The Gen and their characters

Based on the generation theory (Orrheim and Thunvall, 2018； Csiszárik-Kocsír, habil and Garia-Fodor, 2018), a generation usually was taken as the flocks whose birth, growing up, as well as their lives maintaining during a certain term, and thus were presumed to hold the shared viewpoints, as well as characteristics for the reason that they were all affected from the events occurred during the aforementioned period (PrakashYadav and Rai, 2017).

A generation could bring influence to styles and trends on business, while at the same moment learning from the successes and mistakes of the previous generations (Peres and Mesquita, 2018).

In general, six generations could be characteristically differentiated as shown in chronological order in Figure 2.4, among which, Gen Z turns to be tagged with the logo of ‘net generation’ / ‘i-generation’ / ‘digital natives’ / ‘Facebook generation’, etc. (Andrea, Gabriella and Tímea, 2016).

PrakashYadav and Rai (2017) widen the crowd scope of Gen Z to ‘1991 and after’, whilst other definition including ‘1995 - 2015’ (Diena Dwidienawati & Dyah Gandasari, 2018). It’s said that by 2020 the Gen Z is hopefully to exceed 2.56 billion population all over the world (PrakashYadav and Rai (2017).

Figure 2.4: Generations time-lines

	Veteran generation (1925 - 1946)
	Baby boom generation (1946 - 1960)
	X generation (1960 - 1980)
	Y generation (1980 - 1995)
	Z generation (1995 - 2010)
	Alfa generation (2010 +)

(Source: authors' construction, on the basis of Zemke et al., cited in Andrea, Gabriella and Tímea, 2016)

From the research conducted by Forbes Magazine and scholars, the essential characters of Gen Z had been listed. In addition to the traits of persistent, realistic, future-focused, self-aware and tend to communicate with image, and work for success. Andrea, Gabriella and Tímea (2016) stated that Gen Z is practical, more impatient, agile and intelligent, to compare with other generations (Table 5).

Table 2.1: Generational behavioural characteristics in terms of different age-groups

	Baby – boom	X generation	Y generation	Z generation
View	Communal, unified thinking	Self-centred and medium-term	Egotistical, short-term	No sense of commitment, be happy with what you have and live for the present
Relationship	First and foremost personal	Personal and virtual networks	Principally virtual, network	Virtual and superficial
Aim	Solid existence	Multi-environment, secure position	Rivalry for leader position	Live for the present
Self-realization	Conscious carrier building	Rapid promotion	Immediate	Questions the need for it at all
IT	It is based on self-instruction and incomplete	Uses with confidence	Part of its everyday life	Intuitive
Values	Patience, soft skills, respect for traditions, EQ, hard work,	Hard work, openness, respect for diversity, curiosity, practicality	Flexibility, mobility, broad but superficial knowledge, success orientation, creativity, freedom of information takes priority	Live for the present, rapid reaction to everything, initiator, brave, rapid information access and content search
Other possible characteristics	Respect for hierarchy, exaggerated modesty or arrogant inflexibility, passivity, cynicism, disappointment	Rule abiding, materialistic, fair play, less respect for hierarchy, has a sense of relativity, need to prove themselves	Desire for independence, no respect for tradition, quest for new forms of knowledge, inverse socialization, arrogant, home office and-part-time work, interim management, undervalue soft skills and EQ	Differing viewpoints, lack of thinking, happiness, pleasure, divided attention, lack of consequential thinking, no desire to make sense of things, the boundaries of work and entertainment overlap, feel at home anywhere

(Source: Bencsik & Machova, cited in Andrea,Gabriella and Tímea, 2016)

Regardless of the various tags added on the Gen Z, it would make sense to deeply study how these characters influence their online consumption next.

2.5.2 Gen Z's consumption and online / social shopping

Gen Z grew up in the environment where filled of recession and economic uncertainty whilst new technology like social media had rapidly evolved, which made them the social networking generation' (Prakash Yadav and Rai, 2017).

Zhang and Benyoucef (cited from Wei *et al*, 2018) had defined social shopping as a certain kind of e-community which consolidates exchange-related activities related to exchange and computer-meditated social circumstance. Cheung, C, Liu and Lee (2015) observed how social interactions online had influenced Chinese young consumers' purchasing intention among the social purchasing communities.

Kim, Kim and Huang (2014) also found the critical influence of UGC of knowledge creation under the social shopping model. More directly, Lestari (2019) revealed the positive relationship between self-efficiency, perceived usefulness, perceived risk and e-commerce adoption from an e-commerce adoption perspective, providing the evidence to add online shopping preference into Gen Z's tag.

2.5.3 Gen Z in China

It's been found that the Asian including Chinese consumers tend to pursue outside information via channels of their individuals or take a subjective way when they make decision, on the contrary then tend to focus more on alternative variables like others' opinions instead (Tynan et al., cited in NUTTAVUTHISIT, K. 2019). Similaly, Yang (2018) revealed that the factor of 'guanxi' was strongly connected with motivation to share eWOM, which further associated with social shopping motivation in China.

Besides, LIU (2014) summarized that due to the lack of financial and consumer education, the Gen Z's consumption in China are emotional, not reasonable in consumption structure and lack of financial plan – notably, the social and economic environment, e.g., the inauthentic advertising tends to stimulate their unnecessary consumption.

Different with the above scholars, Tian (2018) found that young Chinese consumer

shopped online not only cured from the price and convenience but also the skip from social interaction. Notably, young Chinese consumers like generation Y and Z are special consumer groups for purchasing cosmetic goods (Cui, 2014). Therefore, it was reasonable to bring the influencing factor of Gen Zs' nature character when considering their purchasing motivation.

2.5.4 The online shopping motivations of Gen Z

Based upon prior literature introduced above, in addition to factors like price / quality which had been highlighted on previous chapters, four of the most frequently mentioned ones are UGC (user-generated contents), network / social interaction, eWOM and product variety. This research had adopted these four factors to evaluate Chinese Gen Z's online purchasing motivation accordingly.

Overall, the RED has been positioned within the rank of the most successful online social shopping platforms in China (Chan, n.d.; Shen,2019; Wan, 2019), which provides the ideal research target for analysis.

Also, the UGT framework has been adopted to analyze the purchasing intention for China's Gen Z in social shopping. For example, Wei *et al.* (2018) indicated that hedonic (recreation / enjoyment) and utilitarian value (convenience / time saving / efficiency) had fully mediated the relationship between purchase intention and social value; Wen, Li and Yin (2019a) found that to compare with the Korean youth, the Chinese were more easily to be impacted by the utilitarianism during the online e-shopping.

This paper will conduct the research based on the above literature review, especially those influencing factors.

2.6 Conclusion

In Chapter two, for the purpose of developing a clear and accurate explanation for the current study, the author critically reviewed previous studies and the related journals. Besides, several studies which had used similar measuring factors and designs had also been included within this chapter. By summing up the main variables affecting Chinese female Gen Zs‘ online cosmetics purchasing intention, the theoretical basis of this dissertation has been solidly formed. Upon this basic, the dissertation will be continued in Chapter three to explain the detail researching methodologies.

3.0 Methodology

After the literature review, the research methodology should be well considered to construct a solid structure of the total dissertation.

3.0 Introduction

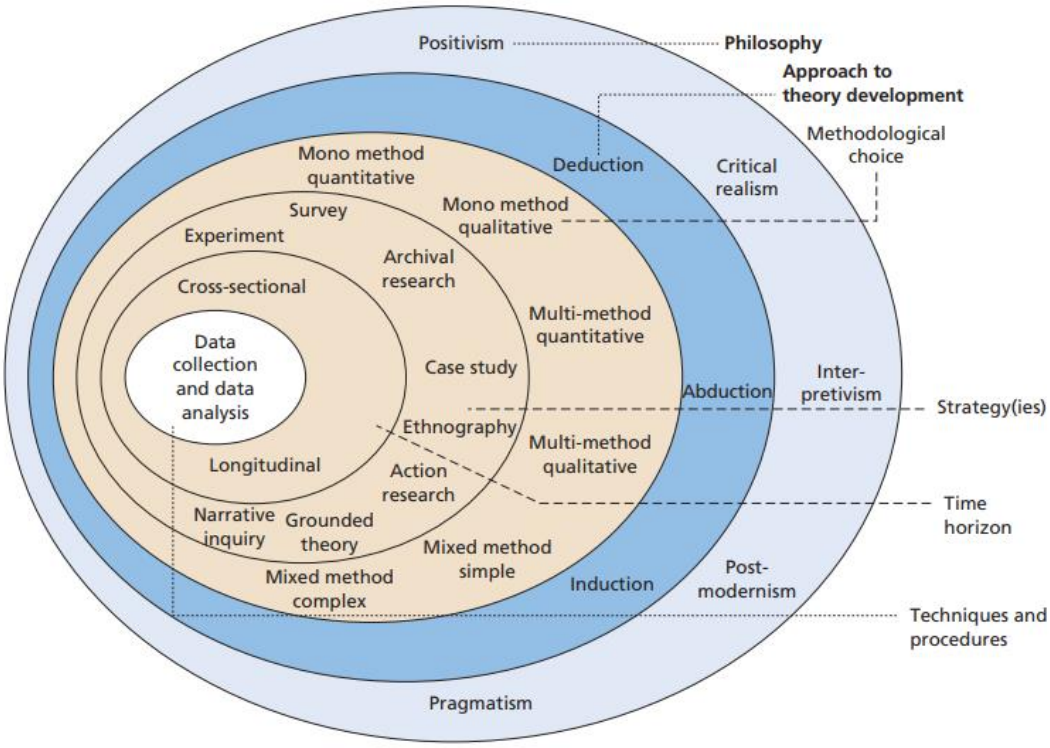
In chapter three the methodology that was applied to perform the study was presented. The chapter began with the epistemological approach that had been taken, as the result of consideration for this research after comparing of ontological and epistemological philosophies.

The chapter then outlined the research design, within which the sampling method, the way to collect data, the questionnaire, how the data to be analyzed, together with the reliability and validity had been discussed. The chapter continued to address the ethical issues concerned with the topics. Finally, a conclusion was made as the summary for this chapter.

3.1 Research Philosophy

As the part of philosophy that deals with knowledge, epistemology refers to assumptions regarding know-how, what constitutes acceptable, valid and legitimate knowledge, as well as the way a human being could exchange knowledge with other individuals (Burrelland, cited in Saunders, Lewis and Thornhill, 2012, p.133). Like Figure 3.1 shows, the ‘Onion’ of research philosophy was structured by different layers, which was explained from outer to the inter in the next.

Figure 3.1: The ‘Onion’ of research



(Source: Saunders, Lewis and Thornhill, 2012, p.124)

3.1.1 Ontological philosophy

Ontological philosophy, or ontology, stands for the essence of reality (Saunders, Lewis, and Thornhill, 2012). It shaped the way upon which the author conducted the research. In this dissertation, the research objects resistant to the relationship between young Chinese consumers online cosmetic product purchasing intention and influencing factors.

3.1.2 Epistemological philosophy

Epistemological philosophy refers to hypothesis concerning knowledge, what elements admissible, legitimate and valid knowledge, as well as the way upon which people could share and exchange knowledge with others (Burrell and Morgan, cited in Saunders, Lewis, and Thornhill, 2012).

3.1.3 Consideration for this research

Table 3.1 lists up the major research philosophies with the detailed analysis on each one from dimensions of ontology and epistemology. On the contrary to the interpretivists, positivists supposedly tend to construct realistic knowledge which exists outside of the mind of an individual, who apparently considers that individual's experience associated with the world reflects an independent, objective reality and that reality delivers the basis for human knowledge (Weber, 2004).

Table 3.1: The five types of research philosophies in business research comparison

Ontology (nature of reality or being)	**Epistemology** (what constitutes acceptable knowledge)	**Axiology** (role of values)	**Typical methods**
	Positivism		
Real, external, independent One true reality (universalism) Granular (things) Ordered	Scientific method Observable and measurable facts Law-like generalisations Numbers Causal explanation and prediction as contribution	Value-free research Researcher is detached, neutral and independent of what is researched Researcher maintains objective stance	Typically deductive, highly structured, large samples, measurement, typically quantitative methods of analysis, but a range of data can be analysed
	Critical realism		
Stratified/layered (the empirical, the actual and the real) External, independent Intransient Objective structures Causal mechanisms	Epistemological relativism Knowledge historically situated and transient Facts are social constructions Historical causal explanation as contribution	Value-laden research Researcher acknowledges bias by world views, cultural experience and upbringing Researcher tries to minimise bias and errors Researcher is as objective as possible	Retroductive, in-depth historically situated analysis of pre-existing structures and emerging agency. Range of methods and data types to fit subject matter
	Interpretivism		
Complex, rich Socially constructed through culture and language Multiple meanings, interpretations, realities Flux of processes, experiences, practices	Theories and concepts too simplistic Focus on narratives, stories, perceptions and interpretations New understandings and worldviews as contribution	Value-bound research Researchers are part of what is researched, subjective Researcher interpretations key to contribution Researcher reflexive	Typically inductive. Small samples, in-depth investigations, qualitative methods of analysis, but a range of data can be interpreted

Postmodernism			
Nominal Complex, rich Socially constructed through power relations Some meanings, interpretations, realities are dominated and silenced by others Flux of processes, experiences, practices	What counts as 'truth' and 'knowledge' is decided by dominant ideologies Focus on absences, silences and oppressed/ repressed meanings, interpretations and voices Exposure of power relations and challenge of dominant views as contribution	Value-constituted research Researcher and research embedded in power relations Some research narratives are repressed and silenced at the expense of others Researcher radically reflexive	Typically deconstructive – reading texts and realities against themselves In-depth investigations of anomalies, silences and absences Range of data types, typically qualitative methods of analysis
Pragmatism			
Complex, rich, external 'Reality' is the practical consequences of ideas Flux of processes, experiences and practices	Practical meaning of knowledge in specific contexts 'True' theories and knowledge are those that enable successful action Focus on problems, practices and relevance Problem solving and informed future practice as contribution	Value-driven research Research initiated and sustained by researcher's doubts and beliefs Researcher reflexive	Following research problem and research question Range of methods: mixed, multiple, qualitative, quantitative, action research Emphasis on practical solutions and outcomes

(Source: Saunders, Lewis and Thornhill, 2012, pp.136-137)

Given that the facts of the objective social rule in ontology, measurable scientific method in epistemology, independent researcher-target relationship in axiology, this dissertation adopted the positive approach for study philosophy (first layer of the 'Onion' in Figure 3.1). In the second and third layer, the inductive approach and quantitative methodological choice had been adopted.

A quantitative methodology was the research which was designed to measure research objectives by empirical assessments that conducted analysis approaches and mathematical measurement (Zikmund, *et al.*, cited in Chi, *et al.*, 2014). It holded strengths in 1) short time frame for the administered survey; 2) higher reliability through critical analyzed; 3) facilitated numerical data regarding extents of disagree or agree sent by respondents, to compare with a qualitative one (Choy, 2014).

In this dissertation, the author collected information from numbers of the

representative individual (Chinese female Gen Zs) by distributing online survey questionnaires. During the particular period affected by COVID-19, quantitative research may cost less in both financial and time-consumption. Furthermore, quantitative data feedbacked from the questionnaires of the survey had been employed to be analyzed by IBM SPSS 26 and transferred to valuable information for EFA and multiple regression analysis.

Shown on the third layer of the 'onion' and named as 'a multi-method quantitative study', the quantitative research design may also adopt more than one type of quantitative data technique as well as a corresponding analytical procedure (Saunders, Lewis and Thornhill, 2012, p.166).

With above consideration taken into account, this dissertation was ditermined as multi-method quantitative research (EFA as well as multiple regression analysis) with primary data applied to analyse the individual employment from Chinese female Gen Zs towards their online cosmetics purchasing intention in RED.

3.2 Research design

Research design refers to the fundamental schedule to collect, measure and analyze data, which typically states the research objective and the types of questions being answered, the technology to be employed to collect data, pursue to select samples and consider the way by which the data to be analyzed (Gary, 2004, p.184). The thinking of this dissertation research design was outlined next.

3.2.1 Sampling method

It's been found that 88% of users of RED are female, and 60% are 30 years old or younger (Chen, 2018). Per the general international norm (e.g., Bresman & Rao,

2017; Lipman, 2017), Gen Z are the age cohort born after 1995, whilst considering the legal, psychological and physical independence, this dissertation will target at the adults' female Gen Z – namely female Chinese citizens born between 1995 and 2002 (age from 18 to 26 in 2020 per Chinese age calculation) who holds cosmetic shopping experience in RED.

A convenience sampling, also known as haphazard / availability sampling technique, had been adopted on this dissertation. Due to the huge total population in China (1.3 Billion), it would be almost impossible for the author to identify the sample flame to adopt random sampling. Therefore, the convenience, with the advantage of its low cost, ease of access (Saunders, Lewis and Thornhill, 2012, p.318), may be suitable for this type of research.

To take other scholar's experience (e.g., Chi, 2014; MCVMA Morais, 2017) into account, a 100~200 persons qualified sample may be suitable for this dissertation, which was supposed to hit the balance between cost / time consuming and research object.

3.2.2 Data collection

Positioned at the core of the 'Onion' in Figure 3.1, it's argued that there exist two methods to obtain data, including primary data and secondary data: the former is the initiated data gathered to conduct a sole research whilst the later is the data initiated gathered to conduct different research purposes and may be reused to answer the current researching questions (Saunders, Lewis and Thornhill, 2012, p.341). Primary data of this dissertation were collected based on an online approach.

This dissertation adopted self-administrated survey methodology to collect the primary data. Collis and Hussey (2013, p.196) found the experimental studied hasn't

been widely used in business research due to its practical and ethical disadvantage; the survey questionnaire had been employed to gather the data. Survey questions for this empirical research were applied based on the previous studies on online shopping behaviours.

Potential participants were invited via post in some of the most the social media in China, for instance, the WeChat, QQ and Weibo. The author approached the potential qualified participants by posting the invitation to the survey. They were invited to make a self-checking to see if they met the criteria as the qualified ones from gender, nationality, age as well as the shopping experience. The legal rights, concern points related with the privacy protection and potencial risk / benefit, etc. taken from the Participant Consent Form as well as the link to PIS (Participant Information Sheet shown on Appendix A) were also shown.

3.2.3 Questionnaire

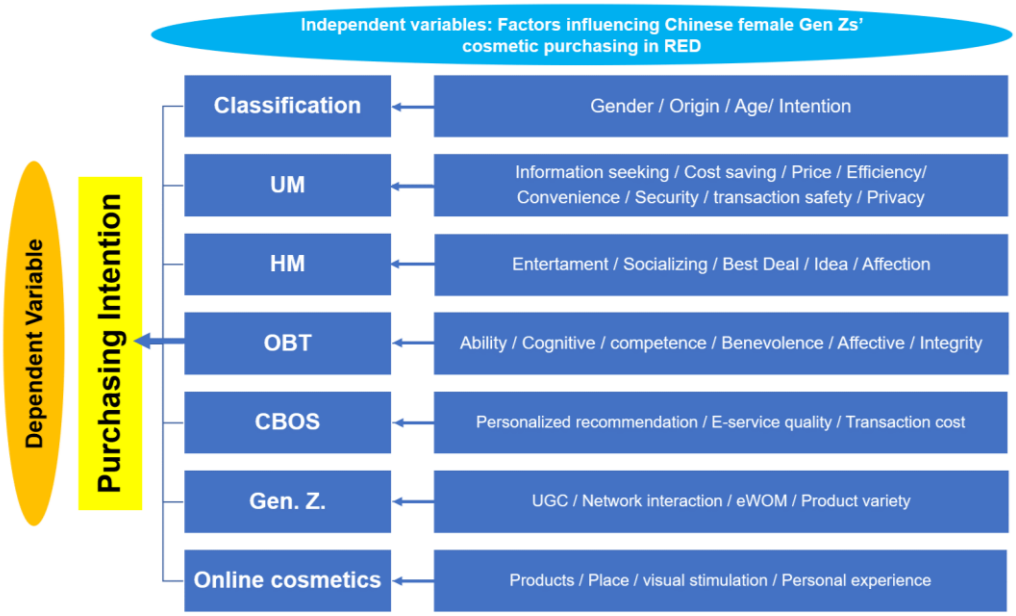
The fourth layer of the 'Onion' in Figure 3.1 presents the research strategy on theory development (Saunders, Lewis and Thornhill, 2012, p.124).

Following the principle of convenience sampling method and targeting at collecting influencing factor to the purchase intention of the RED, the internet (web / mobile) questionnaire was posted on the major social media platform like Weibo / WeChat / QQ to ask for Gen Z's voluntary participants to fill out.

A 5-points Likert scales were employed, varied between Strongly Agree (1) to Strongly Disagree (5) to reflect the influencing factor to the online cosmetic purchase. Constructed from previous literature reviews, the questionnaire consisted of 7 sections comprising of close-end questionnaires with multiple options as well as Likert scale.

The survey options had been chosen for the purpose of collecting research data to evaluate the value, influencing factors and the possibility that if or not there may exist tremendous connections within customer's attitudes and their purchasing demand on cosmetics in the RED. The conceptual framework of the dissertation was underpinned upon the design of the questionnaire, as Figure 3.2 indicates.

Figure 3.2: Conceptual framework of the dissertation



Initially, the questionnaire was initiated in English, which later had a back-translation to Chinese when distributing online. Wenjuanxing, a free online survey platform (https://www.wjx.cn/newwjx/mysojump/newselecttemplete.aspx) had been employed for the survey questionnaire distribution as well as feedback data collection.

Furthermore, the survey had been released through e-mail and shared on cosmetics community website inChina to reach a total of 100 respondents minimum. A range of closed questions was designed and divided into seven parts. The first part began with three filter questions: "Are your female or Male?" and "What is your age range?". These questions may serve to check the participants are qualified in both age range and gender as users / customers of the RED in cosmetics goods.

The purchasing intention was also be verified in this part; The second part of the questionnaire will concern with participants' purchasing stimuli evoked by the UM, whilst the third part the HM; The fourth part of the questionnaire adpted a five-point Likert scale to evaluate the OBT-related influencing factors that affect their purchase behaviour in cosmetic goods which were drawn from previous scholars; the fifth, sixth and seventh part used Likert scale to further measure the CBOS, Gen Z characters and online cosmetics cues.

The processes aimed to validate whether there exist significant relationships between these dependent and independent variables.

3.2.4 Pilot test

In advance of the official release of the survey questionnaire to the respondents, a pilot test had been conducted. Due to the negaive impact of COVID-19, The pilot test had been conducted on a random sample of 5 Chinese female online cosmetic consumers aged from 18 to 26 years old. Due to the reason that this survey was specifically developed for the research, a pilot test may assist to evaluate the enquires and statements so that the validity and reliability of the questionnaire could be tested (Fabrigar and Wegener, 2012).

The respondents had been encouraged to leave comments regarding any statements / questions which may confuse them. Little had been made to the questionnaires as a result of the pilot test. The fixed version of the questionnaire was presented in Appendix B.

3.2.5 Data analysis

As a set of statistical procedures, factor analysis had been developed to assess the number of distinguished concepts which are necessary to account for the pattern of

correlations within a series of measures (Fabrigar and Wegener, 2012). There are actually two discrete classes of factor analysis: exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

Different with a mode like CFA for testing of hypotheses or confirming ideas, EFA had been designed to explore the nature of scales and item interrelationships (Briggs & Cheek, cited in Osborne, Jason and Erin, 2016, p.98). In EFA, the researcher does not hold any particular anticipations in terms of nature or the number(s) of underlying factors / concepts (Thompson, 2004, p.5).

In short, the EFA paradigm hypothesizes that there exist a small volume of common factors in a given domain, which may influence the vast array of surface attributes potentially (Tucker & MacCallum, 1997, p.4). The major object of the EFA had been considered to determine the nature and number of the common factors, together with the pattern of the influences towards the surface attributes.

Fabrigar and Wegener (2012) suggested that EFA were especially suitable to address research question of measurement instrument construction and construct identification, under the condition that data should satisfy the assumptions of the model like linear effects of measured variables, as well as the model fitting process applied to estimate the parameters of the model.

Given the matching on research question addressing and data characters, this dissertation had adopted EFA on data analysis to determine the core factors influencing Chinese female Gen Zs' online cosmetics purchasing motivation in RED.

The software of SPSS had been employed on the quantitative data analysis in this dissertation under the EFA. It's been argued that by adopting software tool like

SPSS, descriptive statistical analysis could be adopted to reveal the outcomes of the provider of feedback's general information, demographic profile and central tendency measurement of constructs (Collis and Hussey, 2013, pp.225-258).

For instance, El-Deeb Sara and Hamed Sara (2019) raised insights from research concerned with the theory of gratification -namely the utilitarian and hedonic motivations applied in an online purchase as well as a perceived risk which refine the scale for future study. They collected qualified data through questionnaires feedbacked from 385 adult respondents under the non-probability convenience sampling approach, among which the SPSS 19.0 was employed for exploratory factor analysis.

Although there existed some limitation in the paper with respect to the generalizability of the study due to lack of the randomness in the respondent population, the SPSS utilization in online commerce based quantitative analysis could be of reference in this dissertation.

Another example comes from Kumar, Saini and Hans (2019), who proposed a practical structure to apply SPSS 21 to quantitatively analyse the influence of locality, gender, stream and studying years of the students on the factor influencing e-shopping, after data gathering from the 5-points Likert scale questionnaire sent back from 240 students. Similar to the paper on empirical research objects, this dissertation will adopt the software of SPSS on data analysis.

3.2.6 Reliability and validity

The Cronbach's alphas to be assessed after the data had been collected from each scale. It's suggested that usually when below 0.6 alphas should not be acceptable whilst should be minimally acceptable when varies between 0.65 and 0.7. Between

0.7 and 0.8, the Cronbach's alphas should be considered as 'good' whereas 'very good' from 0.8 to 0.9, to test the reliability of the instrument (DeVellis, cited in MCVMA Morais, 2017).

Validity could be divided into discriminant validity, content validity and convergence validity (Saunders, Lewis and Thornhill, 2012, p.517). The adoption of KMO (Kaiser-Meyer-Olkin) and BTO (Barlett's Test of Sphericity) may be monitored to test the validity during the data analyzing phase.

3.3 Ethical consideration

The research had been approved by the Management Virtual Programme Research Ethics Committee of the university. The dissertation was supervised by the DA; also it was in line with the online programme of UoL' ordinary supervising procedures, including the outside auditors. All guidelines and norms had been followed. The confidentiality and anonymity of participants had been highly protected.

The PIS (Participant Information Sheet shown on Appendix A) and all Consent Forms required (UoL online programmes, n.d.) had been carefully prepared and the author committed that there was no indirect or direct damage to the participants. Participants of the survey will not be exposed to any risks, hazards or adverse effects as a result of their participation in this study, nor to any risks, hazards or adverse effects as a result of the researching activities in this study.

Prior to the official survey began, the statement of PIS was presented to the potential participant, among which detail purpose of the research, whether or not the potential risk and benefit the research may bring with, how the private information to be protected, what may happen if they want to quit / withdraw, as well as the contact

information of the researcher and his DA for further consulting had been revealed. Then, a ‘Yes’ or ‘No’ button was designed for the potential participant to choose. As long as the ‘Yes’ button being chosen, it would have actively indicated their understanding of and agreement with the information given in the PIS.

To ensure the survey questionnaire in line with the regulation of GDPR (2016, article 7), the survey participants had been asked to provide consent to allow to collect and handle their personal data, and state the data protection principles (e.g., kept no longer than necessary, processed lawfully, securely, etc.) based upon requirement from article 5 (Limani, n.d).

3.4 Summary and limitation

The research methodology, including an overview of the study areas, research philosophy considered for this research after comparing the ontological and epistemological way, as well as the ethical consideration for the study was introduced on this chapter. It had also conducted a deep look at the research design in each phase of data collection via questionnaire, data analysis, together with the reliability and validity of the sampling method.

However, due to the limited resource of timing, financial and manpower, below research limitation may exist.

- The location of the study was limited within China mainland;
- Due to the convenience sampling methodology (Collis and Hussey, 2013, p.197) and small sample size, the finding from this quantitative research may not reflect to the total population of Chinese female Gen Zs; and
- The potential unknown impact from the Covid-19 to consumers’ online purchasing behaviour during the researching phase.

4.0 RESULTS

Under instruction from the research methodology defined in Chapter three, statistic analysis had been conducted to yield the results.

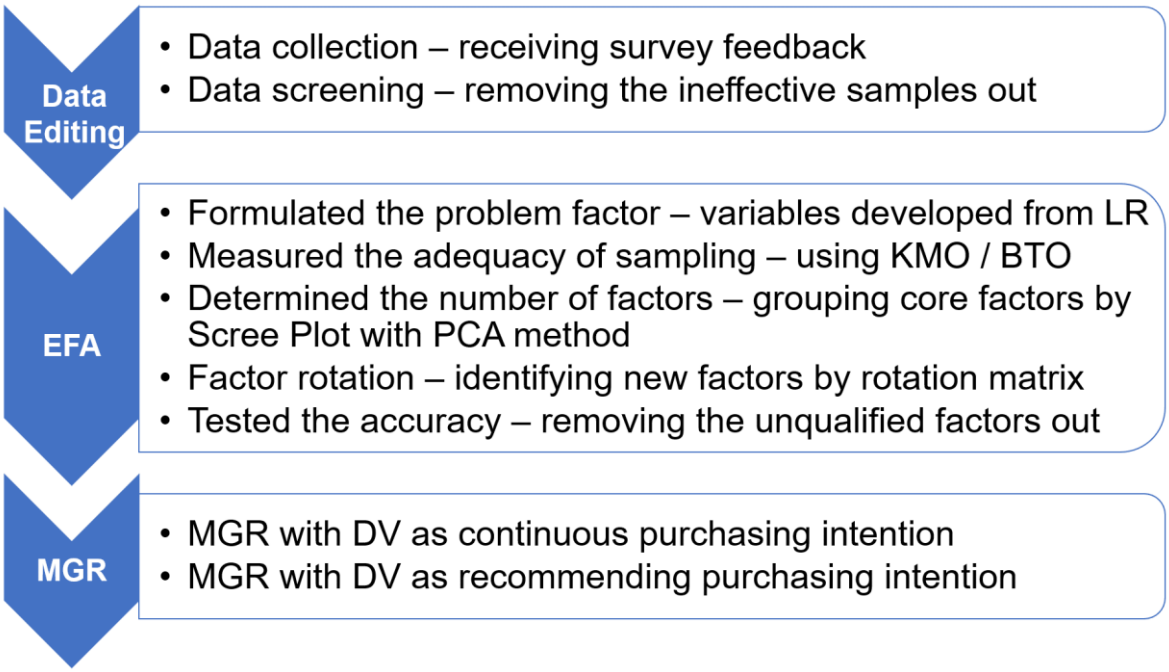
4.0 Introduction

The purpose of this dissertation had been positioned as to explore and identify the common components that could describe the relationship of the observed variables, namely, the major influencing factors to the Chinese female Gen Zs' online cosmetic purchasing intention in the RED. An EFA approach had been conducted on the purchasing motivation variable Items from 6 to 30.

The factor analysis had been accomplished by adopting principal component analyzing with the extraction method of varimax rotation. The four factors identified had been extracted with regards to eigenvalue larger than 1.0. Furthermore, the KMO (Kaiser-Meyer-Olkin) measure of 0.903 could be taken as a meritorious value which indicated the variables were evaluating a common factor.

Besides, the Bartlette's test of sphericity (p-value <0.05) had evaluated the variables listed insider the sample correlation matrix so that the factor analysis could be completed.

Figure 4.1: Data analyzing processes



4.1 Data editing and descriptive statistics

Known as one kind of review of unqualified results from the questionnaire respondents, the data editing process targets at ensuring and improving the data analyzing accuracy. The collected feedback from the questionnaire were justified by the authors according to the research purpose as well as the sampling principles set in advance, during which the unqualified feedbacks may be rejected. It is by this approach that the accuracy of the research could be insured (Chi, *et al*, 2014).

4.1.1 Data collection

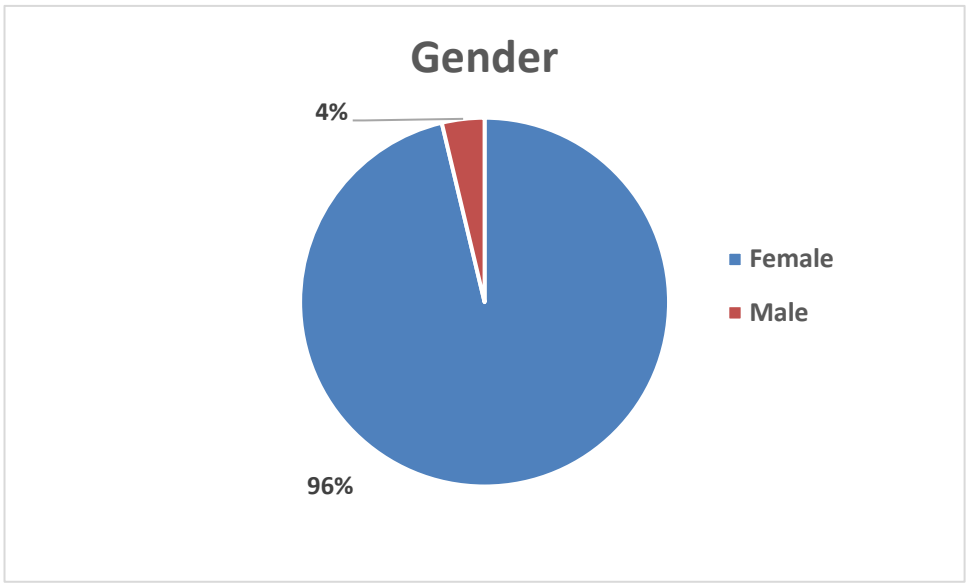
The questionnaire was opened by 134 people. The feedback data had been downloaded from the survey website (Wjx.cn) and saved in the author's PC with password protection.

4.1.2 Sample characterization

Finally, within the total samples, individuals who had taken part in the survey was composed out of 96% females and only 4% of males (Figure 4.2). With respect to the

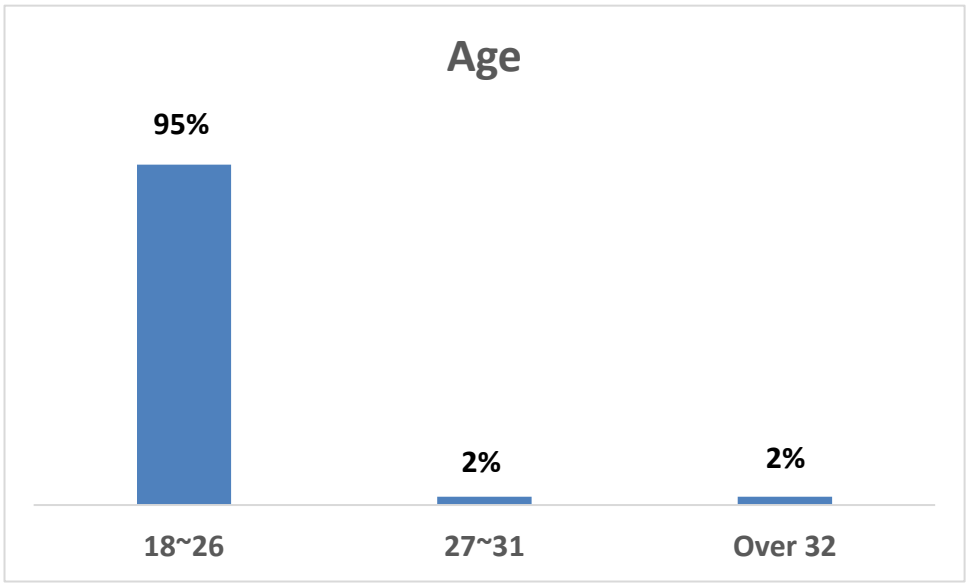
age, major participants had been found to be young adults aged from 18 and 26 (95%), followed by participants aged from 27 to 31 (2%) and the crowd over 32 (2%), shown on Figure 4.3.

Figure 4.2: Sample's gender



(Source: : from questionnaires)

Figure 4.3: Sample's age

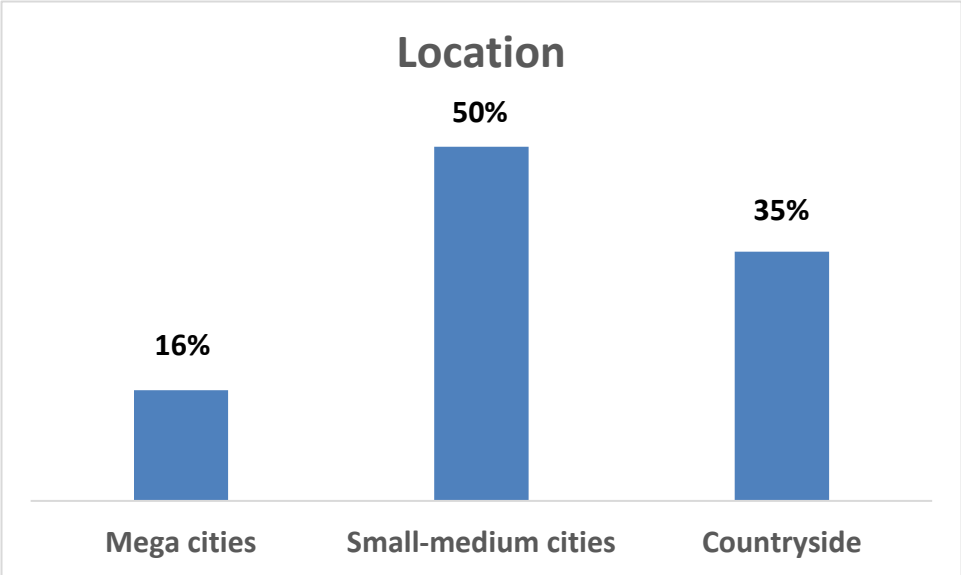


(Source: : from questionnaires)

Regarding the living region, the majority of the participants live in the middle middle-size and small cities (50%), followed by participates living at the countryside

(35%) and lastly the megacities of Beijing, Shanghai, Guangzhou and Shenzhen (Figure 4.4).

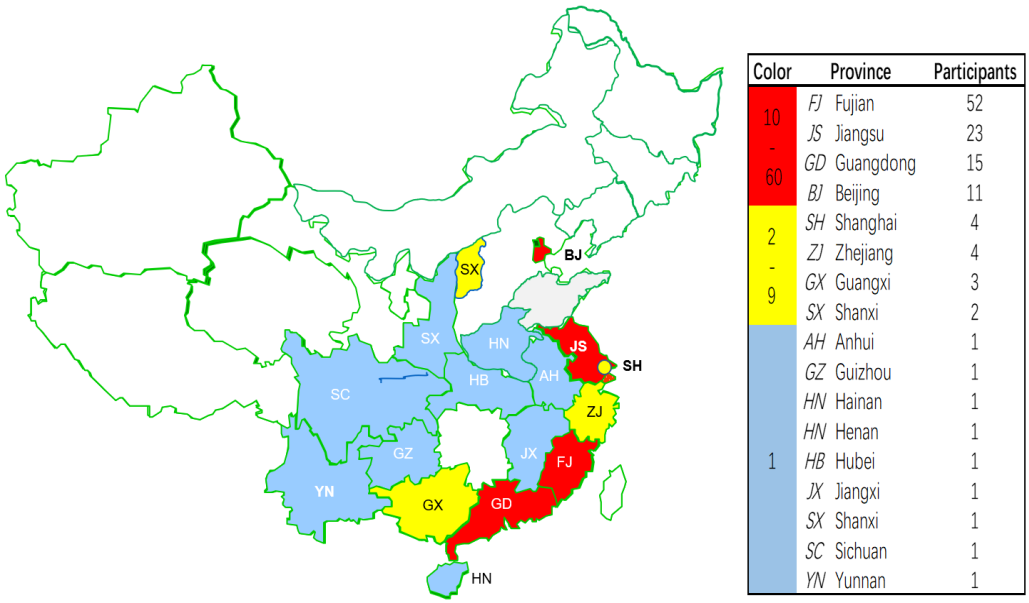
Figure 4.4: Sample's living region



(Source: from questionnaires)

Most of the participants came from the Great Bay Area and Yangtze Delta Area, e.g., Jiangsu, Zhejiang, Fujian and Guangdong province, whilst very little from the middle and none from the Northern and Western China (Red and Yellow area highlighted in Figure 4.5). The locations highlighted in Red overlapped the major developed area in China.

Figure 4.5: Locations of participants



Color	Province	Participants
10 - 60	FJ Fujian	52
	JS Jiangsu	23
	GD Guangdong	15
	BJ Beijing	11
2 - 9	SH Shanghai	4
	ZJ Zhejiang	4
	GX Guangxi	3
	SX Shanxi	2
1	AH Anhui	1
	GZ Guizhou	1
	HN Hainan	1
	HN Henan	1
	HB Hubei	1
	JX Jiangxi	1
	SX Shanxi	1
	SC Sichuan	1
	YN Yunnan	1

(Source: from WJX.com; map only refers to a part of P.R.C.land, not the accurate one)

4.1.3 Data screening

Osborne, Jason and Erin (2016, p.5) pointed out the importance of data cleaning – for the purpose to improve the researching data quality before the results of the questionnaire had been analyzed, a data cleaning process had been conducted. This cleaning procedure consisted an outlier action – to remove the 'male' participants in 'Gender', as well as the '27-31' and 'Over 32' in 'Age', in order to hit the research target of the female Gen Z. After screening, there remain 123 effective samples which had been analyzed further.

The 27 observed variables had been used for analysis in this dissertation, listed from Item 4 to 30. The first two observed variables are dependent variables related with Gen Zs' purchasing intention; the other 25 observed variables are independent variables based on research frameworks discussed in Chapter three; namely, UM, HM, OBT, CBOS, Gen Z and Online Cosmetics.

Gorsuch and Hatcher (cited in Osborne, Jason and Erin, 2016, p.84) had proposed a

minimum concerning with item ratio of the bottom line as 5:1 during EFA process. After data screening, the ratio of 123:25 in this research could be found to be very close to the criteria.

4.2 Exploratory factor analysis (EFA)

Factor analysis was set as an essential kind of statistical analyzing technology to identify a reduced number of variables within a bigger number of experimental factors. As an interdependent technique, all variables may be simultaneously considered in the approach (Hair *et al*., 2010).

Fabrigar and Wegener (2012, p.89) raised several functions of factor analysis, which included (1) to minimize the number of variables whilst the total volume of analyzing information has been maximized; (2) to search the quantitative or qualitative data distinctions when the data volume has been found to be too large; and (3) underlying a series of data to test the hypotheses in terms of the number of factors or distinctions.

According to Zikmund & Babin (2010, p.145), the factor analysis could be distinguished by two types: exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Among the both, CFA may be recommended on the case that the researcher owns intensive theoretical expectations regarding the framework of the factor in advance of conducting the analysis, whilst EFA should be recommended most on the case that the underlying field of a series of data are found to be undefined (Hair *et al.*, 2010).

Exploratory factor analysis (EFA) has been widely employed to determine the factors which influence consumers' intention to get involved into e-shopping (Fabrigar and

Wegener, 2012, p.3).

The underlying framework for this exploratory study is undefined. For a reason, the EFA satisfied the first research objective and had been selected to data analysis in the first phase in this dissertation. Next, several critical related performances would be tested by the IBM software of SPSS Statistics 26.

4.2.1 Data reliability

The first step in the EFA analysis phase had been set to formulate the subject factors. As stated on 4.1.3, among the total 27 observed variables, 25 ones (questionnaire NO.6 to 30) should be taken from the online shopping motivation purpose. As soon as the range of factor had been set, it called for the urgency to validate the data reliability.

The reliability has been normed as a consistent indicator within different measures reflecting the same object, which serves to indicate the stability and consistency of the concept and construct of the measuring goodness (Gary, 2004, p.217). The reliability coefficients could be computed as reliable sum of squares divided by total score variance or the total sum of squares, or ratios of reliable variance (Thompson, 2004, p.12).

Cronbach's alpha, adopted as most frequently applied indicators regarding scale reliability in the social sciences, had been reported to hold some conveniences over other measures of reliability (Cronbach, cited in Osborne, Jason and Erin, 2016, p.182). Therefore, the application of Cronbach Alpha reliability could assess the items and spectrum components.

To average the coefficient calculated through total possible split halves, could result

in the Cronbach Alpha. Like indicated in Table 4.1, Malhotra (2007) believes that from 0 to 1, the reliability coefficient changes.

When the coefficient value increase, the reliable and the consistent the result yielded from the scale also increase, whilst, the figure equal to or less than 0.6 may indicate unsatisfactory consistency reliability internally. Although different scholars had different criteria to norm the perfect match of alpha, generally speaking, like Osborne, Jason and Erin (2016, p.185) stated, the higher, the better.

Table 4.1: Cronbach's alpha coefficient size Rule

Scale	Initial Number of items	Cronbach's α	Cronbach's α if items deleted	Number of items deleted	Final number of items	Comments
UM	5	0.797			5	Good
HM	5	0.726			5	Good
OBT	5	0.913			5	Excellent
CBOS	3	0.725			3	Good
Gen Z	4	0.784			4	Good
Online Cosmetics	3	0.817			3	Very Good

(Source: from calculation in SPSS Statistics 26)

The Cronbach's alphas of the collected data had been assessed for each scale as shown in Table 4.1. In Table 4.1, OBT scale, online cosmetics scale and other scale had an excellent, very good, good Cronbach's alpha.

The author also made a test of reliability to evaluate the total researching instrument consistency inside based listing item from 6 to 30 (purchasing motivation). The result verified the targeted items' reliability by a 0.943 Cronbach's alpha. The result delivered statistical support to the general data reliability related to purchasing intention, as well as purchasing motivation.

4.2.2 Data Unidimensionality

Through the adoption of BTO (Barlett's Test of Sphericity) as well as KMO (Kaiser-Meyer-Olkin), the second step in EFA made correlation matrix to compare the partial with the huge scale correlation coefficient observed and measured the adequacy of sampling and finnally had the unidimensionality degree of the scales assessed.

KMO and Bartlett's tests had been conducted. Cerny and Kaiser (1977) stated that KMO values between 0.8 and 1 indicated the sampling should be adequate. In the EFA procedural, KMO values served to provide a measuring of sampling adequacy (Collis and Hussey, 2013, p.277).

The tested KMO value of 0.903 (0.903 > 0.5) for the collected data from item 6 to 30 showed the high adequacy of the sample, which indicates that 90.3% of the fundamental factors could be explained, or could be measured by one or several common factor(s), as Table 4.2 indicates. The sample size could be regarded as sufficient to give a reliable result.

Table 4.2: Analysis result of Bartlett's test of purchasing influencing variables and KMO

Kaiser - Mayer Olkin (KMO)		0.903
Bartlett's Test of Spheriicty Chi- square	**Approx. Chi-Square**	2218.731
	Df	300
	Sig.	0.000

(Source: from calculation in SPSS Statistics 26)

In addition, Bartlett's test serves to evaluate the assumption of a form of compound symmetry / sphericity (Collis and Hussey, 2013, p.277). In this dissertation, Bartlett's test of sphericity indicated a significant 0.000 p-value (p-value < 0.05), leading to the

conclusion that to evaluate the samples' appropriateness, the variables selected are statistically significant. Namely, the variables of factors taken from the sample correlation matrix had been gathered; therefore it should be logical to give the green light to the analysis to factors (Collis and Hussey, 2013, p.280).

4.2.3 Commonalities of independent influencing factors

Before going to evaluate the total variance explained of each variable, in the third step, the commonalities of those 25 independent influencing factors had been tested. Osborne and Erin (2016, p.12) normed that in EFA, the commonalities were the variance which may be accounted for by all factors, or the estimates of all shared variance in each variable.

In EFA, computed from the matrix of associations, generally the commonalities should always be less than 1.00 for each variable, due to the reason that EFA always seeks to decompose the shared variance (Osborne and Erin, 2016, p.12). Tucker & MacCallum (1997, p.26) suggested that good / suffice estimates could be obtained when commonalities ranged in 0.7 or greater / 0.4 to 0.7 under the EFA condition that 3 to 5 measured variables loading on each factor.

Accordingly, the result shown in Table 4.3 indicates that the Initial reveals whether or not those factors were good ones compared to other factors, at the meanwhile, the extraction reveals that whether the factors were good or not compared to the latent factor. From all of the figures, there were no factors inappropriate in this framework, because the figure of each factor was not significantly different.

Table 4.3: Analysis result of commonalities of independent influencing factors

Item NO. of Questionnaire	Initial	Extraction
6	1.000	0.642
7	1.000	0.515
8	1.000	0.739
9	1.000	0.784
10	1.000	0.693
11	1.000	0.767
12	1.000	0.585
13	1.000	0.674
14	1.000	0.705
15	1.000	0.736
16	1.000	0.741
17	1.000	0.736
18	1.000	0.737
19	1.000	0.772
20	1.000	0.676
21	1.000	0.677
22	1.000	0.676
23	1.000	0.529
24	1.000	0.727
25	1.000	0.655
26	1.000	0.627
27	1.000	0.541
28	1.000	0.644
29	1.000	0.674
30	1.000	0.687

(Source: from calculation in SPSS Statistics 26 with principal component analysis as extraction method)

Table 4.3 also shows all 25 tested factors were greater than 0.5 (communality > 0.5). Among all of the factors, NO.9 (0.784, '*To buy the cosmetical goods in RED is safe*'), 19 (0.772, '*The RED responds constructively when I have a service problem*') and 11 (0.767, '*I enjoy the cosmetical shopping in the RED*') were three highest ones.

The final (extraction) commonalities had been positioned as the variance in items explained by the factors extracted (Fabrigar and Wegener, 2012, p.134); thus all of the items had moderate to high commonalities.

In addition, MacCallum, Widaman, Zhang, and Hong (cited in Thompson, 2004, p.24) discovered those sample sizes in the lower range (e.g., from 100 to 200) may also

accurately yield coefficients of population pattern, if commonalities all varies 0.50 or larger. The result of communality provided supporting evidence to the rationality of the sample size of 123.

4.2.4 Total variance explained of Independent influencing factors

After analyzing the figure from the commonalities of independent influencing factors, the fourth step tried to determine the major influencing factors – in this dissertation, the PCA (Principal Component Analysis) method had been adopted.

Osborne, Jason and Erin (2016, p.11) found the fact that the PCA had been regarded as most popular factor analysis extraction method, which conducted the procedure to reduce the dimension numbers that were sorted by a series of variants associated with the smaller scale of factors.

Table 4.4 presented the analysis result of the total variance explained of independent influencing factors. Generally in a Total Variance Explained table yielded by SPSS, the fifth column presents the variance accounted for by the extracted factors before rotation, whilst the general quantity of variance explained by the four factors may be calculated as the same after rotation; however the variance had been redistributed across the four factors (Fabrigar and Wegener, 2012, p.134).

Following the principle of Kaiser Criterion (Kaiser, cited in Osborne, Jason and Erin， 2016, p.34) taking the factors which's eigenvalue were larger than 1 (eigenvalue>1), four factors may represent the total 25 ones contained in this research in the 67.749% extent. Namely, the cumulative percentage of Initial Eigenvalues was 67.749%, which equals the percentage of the sum of cumulative variance.

Representing the aggregated item-level variance associated with specific factor,

eigenvalues changes from initial statistics to extraction, depends on the extraction mathematics (Osborne, Jason and Erin, 2016, p.13). Accordingly, from the viewpoint of eigenvalues, by employing the method of PCA (Principal Component Analysis), it can be explained that the total 25 independent influencing variables included in this research could be grouped into four core ones which still representing a total of variables tested majorly.

Table 4.4: Analysis result of total variance explained of Independent influencing factors

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	10.845	43.382	43.382	10.845	43.382	43.382	5.992	23.967	23.967
2	3.774	15.095	58.477	3.774	15.095	58.477	5.062	20.247	44.214
3	1.305	5.221	63.698	1.305	5.221	63.698	4.167	16.667	60.881
4	1.013	4.050	67.749	1.013	4.050	67.749	1.717	6.867	67.749
5	0.884	3.537	71.286						
6	0.787	3.147	74.432						
7	0.686	2.746	77.178						
8	0.636	2.545	79.723						
9	0.569	2.276	81.999						
10	0.531	2.122	84.121						
11	0.475	1.899	86.020						
12	0.401	1.604	87.624						
13	0.374	1.497	89.121						
14	0.359	1.436	90.557						
15	0.321	1.282	91.839						
16	0.310	1.241	93.079						
17	0.276	1.104	94.183						
18	0.263	1.050	95.233						
19	0.243	0.973	96.206						
20	0.225	0.899	97.105						
21	0.196	0.784	97.889						
22	0.154	0.618	98.507						
23	0.135	0.539	99.046						
24	0.126	0.506	99.552						
25	0.112	0.448	100						

(Source: from calculation in SPSS Statistics 26 with extraction method of principal component analysis)

4.2.5 Scree Plot

To get a clear visual image for better understanding, based upon the analysis in the

fourth step, the fifth step initiated a graph of scree plot to support the factor extraction decision making.

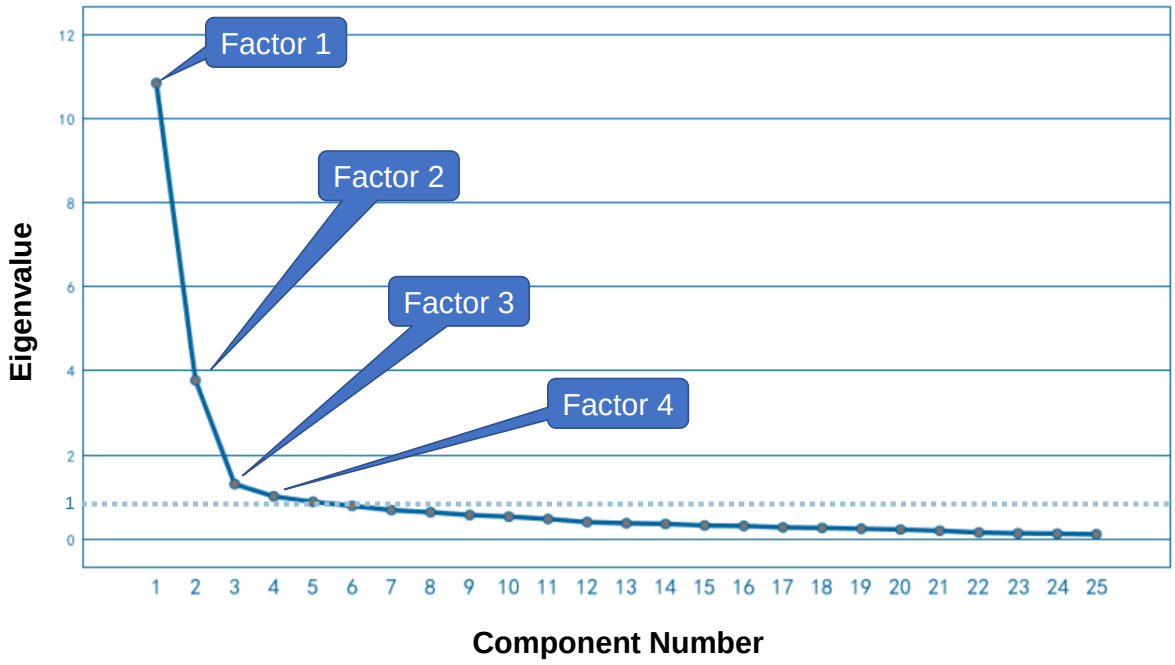
Fabrigar and Wegener (2012, p.54) pointed out four critical criteria on major common factor choosing, including 1) the model works well on representing the interconnections within the evaluated variants; 2) the module with less shared factors may generally work worse on representing the interconnections; 3) the module with more shared factor may not work obviously better on accounting for the interconnections, and 4) the total shared factors extracted from the module may be easily explainable and could be associated with establishment of theoretical usefulness to the territory of interest.

In this dissertation, the most widely used eigenvalues-greater-than-one rule, also known as Kaiser Criterion, had been employed to sort the major common factors.

The Kaiser Criterion principles conduct calculation on the eigenvalues from the reduced correlation matrix / unreduced correlation matrix, and nextly evaluating the number of eigenvalues which are larger than one (Fabrigar and Wegener, 2012, p.55).

Accordingly, it was easy to found that there were total four factors with their eigenvalue larger than 1.0 (positioned above the dot-line on Figure 4.6), ranking from 1 to 4. In the coming steps, these four factors were deeply analyzed in line with the research objects.

Figure 4.6: Analysis result of the scree plot of the component number of influencing factors



(Source: from calculation in SPSS Statistics 26)

4.2.6 Factor Matrix

After getting the result of major influencing factors, the sixth step tried to deeply analyze how many variables connected with these four major factors. Being arranged in the form of a matrix, the factor loading presents the surface attributes in rows, the common factors in columns, and the effect of a given factor on a given surface attribute in each factor – loading element (Tucker & MacCallum, 1997, p.14).

However, through Table 4.5 of the factor matrix, it was still uneasy to group factors or determine patterns which could interpret the relationship from the factor determination result. Scholars like Fabrigar and Wegener (2012, p.135) argued the matrix were usually not very useful in and of themselves, for the reason that had yet not been rotated toward the simple structure.

Obviously, another approach was critical, for instance, the data rotation method.

Table 4.5： Analysis result of factor matrix of independent influencing factors

Component Matrix				
	Compoent			
Questionnaire NO.	1	2	3	4
17	0.806	0.026	-0.274	-0.097
18	0.794	0.040	-0.317	0.066
19	0.771	0.162	-0.373	-0.105
22	0.755	-0.008	-0.207	-0.253
16	0.751	-0.004	-0.373	-0.194
20	0.732	0.196	-0.302	0.103
30	0.699	-0.266	0.352	-0.063
13	0.697	0.411	0.011	0.136
21	0.690	-0.412	-0.093	0.149
15	0.680	-0.471	0.209	0.092
29	0.672	-0.423	0.206	0.009
27	0.663	-0.316	-0.033	-0.033
28	0.656	-0.417	0.018	0.199
26	0.647	0.067	-0.036	-0.451
8	0.621	0.526	0.045	0.273
14	0.613	-0.540	0.044	0.187
24	0.613	-0.545	0.234	0.008
25	0.607	-0.214	0.314	-0.378
6	0.583	-0.390	-0.039	0.387
23	0.582	0.317	0.147	-0.262
10	0.580	0.548	0.220	0.085
7	0.568	0.432	-0.013	0.072
12	0.483	0.351	0.444	-0.177
9	0.517	0.681	0.145	0.179
11	0.553	0.618	0.220	0.177

(Source: from calculation in SPSS Statistics 26)

4.2.7 Factor rotation

The seventh step was taken to address the research problem raised from the last step, by rotating data of major factors. Osborne, Jason and Erin (2016, p.6) argued that the goal of factor rotation had been set to defecate the frame of factor and thus insured the output of the EFA most explainable.

Namely, the rotational indeterminacy had been developed to address the challenge of transforming a tremendous large lot of alternative orientations related with the

principal components or shared factors within multiple-perspective space (Fabrigar and Wegener, 2012).

A '*rotated component matrix*' was created as shown in Table 4.6, within which the newly identified four factors could be easier to be interpreted, under the criteria of selecting the value of loading factors which were larger than 1.0. Namely, four factors identified had been chosen by the regulation that the eigenvalue greater than 1.0 (eigenvalue > 1.0).

The widely applied normal varimax, also known as Varimax with Keizer normalization had been employed in the factor rotation step. Proposed by Kaiser in 1958, the varimax rotation provided a solution within all the equally best-fitting solutions by yielding maximum variability in the factor loadings (Fabrigar and Wegener, 2012, p.73).

In theory, varimax rotation tends to make the variance maximized inside a factor (or inside a loadings column of factor) so that smaller loadings could be minimized whilst larger could be increased (Osborne, Jason and Erin, 2016, p.63). Indicated in Table 4.6, the analysis result of rotated factor matrix presented the value of axis rotation in varimax method (Varimax with Keizer Normalization), sorted from high value to the lower, item by item.

Through this kind of convergent rotation (Rotation Covergen) technology, the loading factor had been determined and resulted in 4 core / major factors, which were left for further studied. These core factors could be interpreted as representing a willingness to provide social or psychological support towards the research object. (Fabrigar and Wegener, 2012, p.138).

Table 4.6: Analysis result of the rotated factor matrix of independent influencing factors

Rotated Component Matrix				
	Compoent			
Questionnaire NO.	1	2	3	4
15	**0.815**	0.091	0.149	0.202
14	**0.814**	-0.100	0.204	0.023
24	**0.801**	-0.190	0.114	0.267
28	**0.755**	0.099	0.253	0.011
29	**0.750**	0.093	0.176	0.268
6	**0.741**	0.129	0.201	-0.191
21	**0.729**	0.071	0.374	0.004
30	**0.670**	0.241	0.112	0.408
27	**0.601**	0.083	0.377	0.177
9	-0.046	**0.867**	0.166	0.058
11	0.035	**0.860**	0.124	0.108
8	0.129	**0.808**	0.260	-0.044
10	0.069	**0.791**	0.162	0.190
13	0.199	**0.706**	0.362	0.070
7	0.080	**0.626**	0.331	0.079
23	0.091	**0.482**	0.311	0.438
16	0.310	0.202	**0.760**	0.158
19	0.241	0.365	**0.757**	0.091
17	0.380	0.315	**0.687**	0.143
18	0.408	0.362	**0.663**	-0.016
22	0.335	0.231	**0.652**	0.292
20	0.281	0.462	**0.618**	-0.054
25	0.465	0.113	0.193	**0.624**
26	0.193	0.213	0.529	**0.515**
12	0.107	0.573	0.004	**0.495**

(Source: from calculation in SPSS Statistics 26 in Varimax method with Kaiser normalization)

4.2.8 Factor grouping and re-naming

Following the last step of four core factor extraction, the eighth step was arranged to group and re-name these factors in a more logical way. It's been argued that in this situation, the rotation results of these factors could then be expressed and interpreted, in variables which holds the high loading (Ghozali, 2011, p.273).

On the step, the factors which hold the top-loading values were selected for the purpose of variables representing, as Table 4.7 indicates.

Table 4.7: Grouping and re-naming factors

Core Factor	Questionnaire NO.	Variables	Loading	PCT of variance	Com-multive %	Re-named
1	15	Affection (from *content*)	0.815	43.382	43.382	***App content and design***
	14	Idea (new product searching)	0.814			
	24	UGC (user generated *content*)	0.801			
	28	Product (oversea brand searching)	0.755			
	29	APP web site *design*	0.75			
	6	Product *information* seeking	0.741			
	21	Personalized recommendation (*content* presenting)	0.729			
	30	Personal experience	0.67			
	27	Product variety (listed in the *content*)	0.601			
2	9	Security / safety (*UM*)	0.867	15.095	58.477	***UM***
	11	Entertament	0.86			
	8	Shopping effeiciency / convenience (*UM*)	0.808			
	10	Privacy *(UM)*	0.791			
	13	Price bargain (*UM*)	0.706			
	7	Cost saving (*UM*)	0.626			
	23	Transaction cost （*UM*）	0.482			
3	16	Ability / cognitive / competence (*OBT*)	0.76	5.221	63.698	***OBT***
	17		0.687			
	19	Benevolence / Affective (*OBT*)	0.757			
	18		0.663			
	22	E-service quality (e-quality also included in *OBT*)	0.652			
	20	Integrity (*OBT*)	0.618			
4	25	Network interaction	0.624	4.05	67.749	***Social Shopping***
	26	eWOM	0.515			
	12	*Socializing*	0.495			

(Source: dessertation questionnaire)

Totally four components of core factors had been extracted and re-named, included 1) APP content and design, 2) UM, 3) OBT, and 4) online social shopping.

Factor Group 1, consists of variables majorly related to the content shown in the RED

APP, the website design of the APP, as well as the usability of product / brand seeking and searching function. Therefore, this factor could be re-named as ‘APP content and design’.

Factor Group 2, mainly consist of five UM variables, presents the extent to which UM evoked when the Chinese female Gen Zs’ purchasing the cosmetics online. Therefore, this factor may be considered as ‘UM’ factor.

Factor Group 3, majorly consist of e-service together with five OBT variables, including ability / cognitive / competence, benevolence / affective and integrity. According to Kim and Jones (2009), the OBT indicated the extent upon which an online cosmetics customer could exactly foresee a consistent level of service or product quality. Therefore, this factor could be re-named as ‘OBT’.

Factor Group 4, consist of network ‘interaction’, ‘eWOM’ and ‘socializing’ variables, could be considered to be ‘online social shopping’ related. Lee (2017) argued that social shopping included both service and product sales with consumers’ participation within the SNS circumstance, with a synchronized connection within merchants, consumers and SNS.

Lee (2017) also raised several motivations on social shopping, including eWOM, socializing and interaction (with friends, family and others). Given that what these three variables presented, it was logical to re-name Factor Group 4 as ‘online social shopping’.

Instead of charging the total 25 variables, in next steps these four core factors had been employed to evaluate the relationship between Chinese female Gen Zs’ shopping intention.

4.2.9 The accuracy

The last step of EFA had been set to evaluate the accuracy of the model. By detail looking at these four factor's variance % item by item, it could be found if or not any variance % - namely the magnitude of the residual correlation percentage was below 5% or not (Muhammad, *et al.*, 2018), to verify the factor analysis model accuracy by Principal Component Analysis (PCA).

Table 4.8: The accuracy of the model PCA method

Factor	Total	% of Variance	Cumulative %
1	10.845	43.382	43.382
2	3.774	15.095	58.477
3	1.305	5.221	63.698
4	1.013	4.050	67.749

(Source: from calculation in SPSS Statistics 26)

Table 4.8 shows that the fourth factor, which had been re-named as 'online social shopping', was only 4.050 % in variance % and thus should be removed out of the list according to the accuracy principle.

In the 4.2 sub-section, totaly three core factor had been identified, which were 1). 'APP content and design', 2).'UM' and 3). 'OBT' had been extracted by the EFA techniques. All these three core factors were larger than 5% at the variance value so that the factor analysis model adopting PCA should be correct.

4.3 Regression analysis

Following EFA, subsequently, a regression analysis was applied to identify if or not the three extracted core factors had significantly influenced Chines female Gen Zs' cosmetics online purchasing intention. In a module of multiple regression, the result from the dependent variable normally should be forecasted by more than one independent variables (Collis and Hussey, 2013, p.282).

In this section, two questionnaires had been designed to test the Chinese female Gen Zs' cosmetics purchasing intention in RED, which were NO. 4 – 'I will continue buying cosmetics in the RED' and NO.5 – 'I will recommend others to buy cosmetics from the RED'. Toward different directions, the analysis was conducted and separated into two sub-section.

4.3.1 Multiple Regression Analysis with DV as NO.4

Continuous purchasing intention has been widely employed as one of the critical dimentions on measuring consumers' shopping intention, for instance, Fota, Wagner and Schramm-Klein (2019) inquired '*I expect to continue with rental-commerce often in the future*' to evaluate consumers' behavioural intention toward rental commerce.

The MRA (Multiple Regression Analysis) was first employed to discover the influence of three core factors on motivations toward Chinese female Gen Zs' continuous online shopping behaviour. The outputs of the MRA had been listed in Table 4.9, 4.10 and 4.11.

The predictors were taken from the result yielded in sub-section of 4.2, including APP content and design as core Factor 1, UM as core Factor 2 as well as OBT as core Factor 3.

Table 4.9: MGA Model summary with DV as NO.4

Model	R	R Square	Adjusted R Sequre	Durbin-Waston Statistic
1	0.669[a]	0.447	0.433	1.814

a. Predictors: (Constant), Core factor 1 – APP content & design, Core factor 2 – UM, Core factor 3 – OBT;

b. DV (dependent variable): Questionnaire NO.4 – I will continue buying cosmetic in the RED (online purchasing intention)

(Source: from calculation in SPSS Statistics 26)

As Table 4.9 indicated, the coefficient of correlation (R = 0.669) revealed the fact that

there existed a positive connection between purchasing intention online (here the continuous purchasing intention presented by questionnaire NO.4) and the independent variables which were APP content and design, UM, and OBT.

Furthermore, the R square (coefficient of determination) which had been adopted to evaluate the regression model was 0.447. The figure showed that 44.7% from the general variation within the Chinese female Gen Zs' online continuous purchasing intention on cosmetics in the RED could be explained by the three predictor variations (App content and design, UM, OBT).

Table 4.10: ANOVA[a]

Model		Sum of squares	df	Mean Square	F	Sig.
1	Regression	23.412	3	7.804	32.102	0.000[b]
	Residual	28.929	119	0.243		
	Total	52.341	122			

a. Predictors: (Constant), Core factor 1 – APP content & design, Core factor 2 – UM, Core factor 3 – OBT;

b. DV (dependent variable): Questionnaire NO.4 – I will continue buying cosmetic in the RED (online purchasing intention)

(Source: from calculation in SPSS Statistics 26)

As Table 4.10 ANOVA shows, 32.102 (the F value) was significant at $p = 0.000$ ($p < 0.05$).Thus, it could confirm the fitness of the module, namely, the module used was statistically significant ($p = 0.000$). Moreover, the overall regression model of the three predictor variations including App content and design, UM, OBT had well demonstrated in explaining the variation on the Chinese female Gen Zs' online cosmetics purchase intention in RED.

Table 4.11: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.927	0.044		65.835	0.000
	App content & design	0.188	0.045	0.288	4.219	0.000
	UM	0.393	0.045	0.600	8.800	0.000
	OBT	0.046	0.045	0.070	1.034	0.303

a. DV (dependent variable): Questionnaire NO.4 – I will continue buying cosmetic in the RED (online purchasing intention)

(Source: from calculation in SPSS Statistics 26)

In Table 4.11, it was easy to found that there existed a positive relationship significantly between App content & design, UM and the continuous purchasing intention online. On the other hand, OBT held a relationship insignificantly towards the continuous purchase intention online.

Based on Table X, the linear equation could be established as below:

Continuous online purchasing intention = 2.927 + 0.188 (APP content and design) + 0.393 (UM) + 0.046 (OBT)

Upon above equation formed, when one unit increases in UM whilst others keeps stable, it may increase 0.393 units inside the continuous purchasing intention online, and so does 0.188 units when one unit of APP content and design increases. However, only 0.046 unit of continuous online purchasing intention will be increased when one unit of OBT increases.

In addition, the figure of Beta (standardized coefficient) could indicate to what extent that three variables influence the online purchase intention when these variables worked together (Saunders, Lewis and Thornhill, 2012, p.548). Within three variables

independent, UM brought the most significant effect on the continuous purchasing intention online toward cosmetics in RED with the standardize beta equal to 0.600 (β = 0.600; p = 0.000), namely, the effect to the online purchasing intention was positive and statistically significant.

Thus, it indicated that UM might be the most important predictor of the Chinese female Gen Zs' online cosmetics purchasing intention in RED. Nextly, it was followed by APP content & design where the standard beta equalled to 0.288 (β = 0.288; p = 0.000), and obviously, the effect to the online purchasing intention was also positive and statistically significant.

Lastly, OBT held the least influence on the Chinese female Gen Zs' online cosmetics purchasing intention in RED among three variables with the standard beta of 0.070 (β = 0.070; p = 0.303), showing the insignificant effect to the continuous purchasing intention ($\rho > 0.05$).

In this sub-section, the strongest dimension of online shopping motivations explaining continuous online purchasing intention of cosmetics was Um (β = 0.600). When making their continuous decision to purchase cosmetics online, the Chinese female Gen Z consumers were motivated by utilitarain motivation.

Secondly, online continuous purchase intention was explained by the APP content and design (β = 0.288). The concern raised from Chinese female Gen Zs to what was showed on the RED APP, how the website had been decorated made this dimension of online motivations the second strongest one contributing to their continuous online purchasing intention.

4.3.2 Multiple Regression Analysis with DV as NO.5

In addition to the 'continuous' purchasing intention, another indicator also tends to be employed on consumers' shopping intention measurement, which refers to the 'willing to refer to others', or 'recommendation' intention. For example, Deng (2015) designed one of his questionnaires as 'I always recommend that my friends buy ethical products' to test Chinese consumers' ethical purchasing decision-making motivation.

Given that the complexity of consumer's purchasing behaviour, besides NO.4, there was another one which had been designed to test Chinese female Gen Zs' cosmetics purchasing intention – the NO.5 of questionnaire inquired the 'recommending' purchasing intention, by asking the agreement extent of 'I will recommend others to buy cosmetics from the RED.'

In this sub-section, again, the MRA was adopted to discover the influence of three core factors on purchasing intentions toward Chinese female Gen Zs' recommending online shopping behaviour. The output of the MRA had been listed in Table 4.12, 4.13 and 4.14.

The predictors were also taken from the result yielded in sub-section of 4.2, including APP content and design as core Factor 1, UM as core Factor 2 together with OBT as core Factor 3.

Table 4.12: MGA Model summary with DV as NO.5

Model	R	R Square	Adjusted R Sequre	Durbin-Waston Statistic
1	0.590[a]	0.348	0.331	1.988

a. Predictors: (Constant), Core factor 1 – APP content & design, Core factor 2 – UM, Core factor 3 – OBT;

b. DV (dependent variable): Questionnaire NO.5 – I will recommend others to buy cosmetic from the RED (online purchasing intention)

(Source: from calculation in SPSS Statistics 26)

Guided in Table 4.12, the correlation coefficient (R = 0.590) revealed the fact that there existed a relationship positively between purchase intention online (here the recommending purchasing intention presented by questionnaire NO.5) and the independent variables which were APP content and design, UM, and OBT.

Moreover, the R square (coefficient of determination) which had been adopted to evaluate the regression module was 0.348. The figure revealed that 34.8% from the general variation within the Chinese female Gen Zs' online recommending purchasing intention on cosmetics in the RED could be explained by the three predictor variations (App content and design, UM, OBT).

Table 4.13: ANOVA[a]

Model		Sum of squares	df	Mean Square	F	Sig.
1	Regression	25.785	3	8.595	21.142	0.000[b]
	Residual	48.378	119	0.407		
	Total	74.163	122			

a. Predictors: (Constant), Core factor 1 – APP content & design, Core factor 2 – UM, Core factor 3 – OBT;

b. DV (dependent variable): Questionnaire NO.5 – I will recommend others to buy cosmetic from the RED (online purchasing intention)

(Source: from calculation in SPSS Statistics 26)

Shown in Table 4.13 ANOVA, 21.142 (the F value) was significant at p = 0.000 (p < 0.05). Thus, it could confirm the module's fitness; that is, the module used was significant statistically (p = 0.000). Furthermore, the overall regression model of the three predictor variations covering App content and design, UM, and OBT had well demonstrated in explaining the variation on the Chinese female Gen Zs' online

cosmetics purchase intention in RED.

Table 4.14: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.764	0.057		48.081	0.000
	App content & design	0.061	0.058	0.079	1.061	0.291
	UM	0.413	0.058	0.530	7.162	0.000
	OBT	0.192	0.058	0.246	3.318	0.001

a. DV (dependent variable): Questionnaire NO.5 – I will recommend others to buy cosmetic from the RED (online purchasing intention)

(Source: from calculation in SPSS Statistics 26)

Within Table 4.14, it was observed that there was a significant positive relationship between UM, OBT and the recommending purchasing intention online. On the other hand, APP content and design yielded an insignificant positive relationship in this model.

According to Table X, the below linear equation could be formed:

Recommending online purchasing intention = 2.764 + 0.061 (APP content and design) + 0.413 (UM) + 0.192 (OBT)

Based on above equation formed, when one unit increases in UM whilst others keep stable, it will increase 0.413 units in the continuous purchasing intention online, and so does 0.192 units when one unit of OBT increases. However, only 0.061 unit of continuous online purchasing intention will be increased when one unit of APP content and design increases.

Regarding the figure of Beta (standardized coefficient), among the three independent variables, UM showed the most significant effect on the continuous purchasing

intention online toward cosmetics in RED with the standardize beta equal to 0.530 (β = 0.530; p = 0.000), that is, the effect to the online purchasing intention was positive and statistically significant.

Accordingly, it could be observed that UM may be the most important predictor of the Chinese female Gen Zs' online cosmetics purchase intention in RED. Next, it was followed by OBT with the standard beta equalled to 0.246 (β = 0.246; p = 0.001), and obviously, the effect to the online purchasing intention was also positive and statistically significant.

Lastly, APP content and design showed the least influence on the Chinese female Gen Zs' online cosmetics purchasing intention in RED among all three variables with the standard beta of 0.079 (β = 0.079; p = 0.291), showing the insignificant effect to the continuous purchasing intention ($\rho > 0.05$).

In this sub-section, the strongest dimension of online shopping motivations contributing to recommending online purchasing intention of cosmetics was again UM (β = 0.530). This core factor had already shown its strongest influence in previous sub-section. When making their recommendation to purchase cosmetics online to others, the Chinese female Gen Z consumers were motivated by the utilitarian motivation and cost mostly.

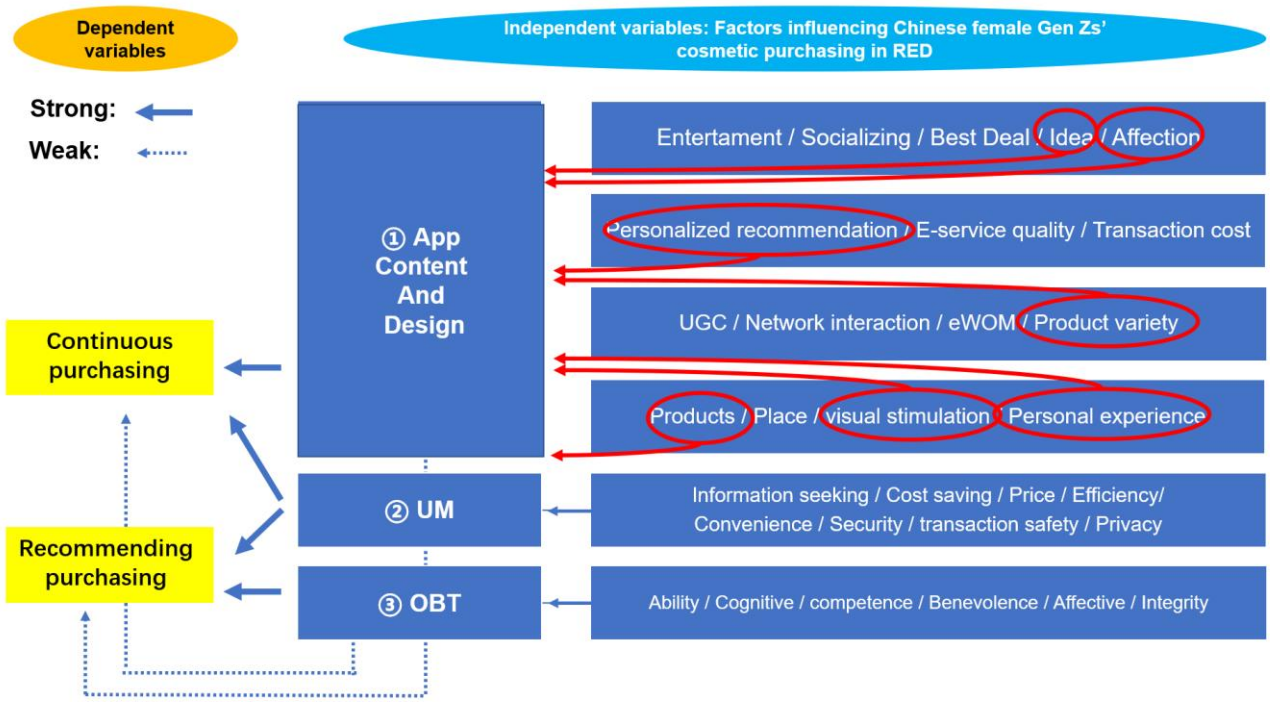
Secondly, online recommending purchase intention was explained by the OBT (β = 0.246). It was the trust with the brand of RED that made this dimension of online motivations the second strongest one contributing to their recommending online purchasing intention.

4.4 Chapter Summary

This chapter reveals the primary data collected that influence the Chinese female Gen Zs' online cosmetic purchasing intention. Totally three core factors had been extracted by the approach of EFA, including ① App content and design, ② UM, and ③ OBT (shown in Figure 4.7).

The further analysis applied with multiple regression analysis showed the strong influence from 'App content and design' to continual purchasing, 'OBT' to recommending purchasing, and 'UM' to both. These results, together with recommendation supported by current literatures, were discussed in Chapter five to guide the CBOS websites like the RED to understand their consumers better and thus improve their service better.

Figure 4.7: Conceptual Framework



5.0 DISCUSSION OF RESULTS

As soon as results been yielded, a critical discussion is critical for further study.

5.0 Introduction

The chapter five submited findings as well as results of the dissertation. The data package had been verified to guarantee the appropriateness of factor analyzing together with MRA. The outputs yielded from EFA, MRA, and ANOVA had been presented. Continually, the results had been discussed with respect to their connection with each of the researching objectives relevantly. The package of data had been analyzed with the software of IBM SPSS in version 26.0.

5.1 Response ratio and sample

Totally 134 questionnaires had been returned from the distribution of the online questionnaires in WJX.com with the convenience sampling method. Among that, eleven of the questionnaires had been found to be unsuitable for this dissertation (from gender and age), which was feedbacked from a total of 123 effective responses, of a 91.79% effective responding ratio.

The effective feedback from questionnaires were significantly closer to 125 (the minimum sample size), which was explained in Section 4.1.3 of Chapter Four. Thus, the sample size could be determined as acceptable in light of this dissertation’s researching purpose.

5.2 Descriptive statistics

From the effective 123 questionnaires, 50% of respondents were living in the small-medium cities, 35% at the countryside, whilst 16% at the megacities like

Beijing, Shanghai, Guangzhou and Shenzhen.

When differentiating respondents based on the criteria of online cosmetics purchasing intention, the 60 respondents from small-medium cities were similar in terms of most high positive intention on both continuous (positive 27%) and recommending (positive 32%) one (shown on Table 5.1 and 5.2).

On the contrary, respondents from countryside hold lowest continuous purchasing intention (negative 18%), whilst respondents from megacities had the lowest recommending purchasing intention (negative 18%).

Table 5.1: Continuous purchasing intention in the different region

Region	No.4 - I will continue buying cosmetics in the RED						
	(a+b)/ total%	(a) Strongly agree	(b) Agree	(c) Not sure	(d) Disagree	(e) Strongly disagree	(d+e)/ total%
Mega cities	**18%**	1	2	12	2	0	**12%**
Small-medium cities	**27%**	0	17	36	8	1	**15%**
Countryside	**18%**	0	8	28	8	0	**18%**

(Source: from the questionnaire in this dissertation)

Table 5.2: Recommending purchasing intention in the different region

Region	No.5 - I always recommend that my friends buy ethical products						
	(a+b)/ total%	(a) Strongly agree	(b) Agree	(c) Not sure	(d) Disagree	(e) Strongly disagree	(d+e)/ total%
Mega cities	**18%**	2	1	11	3	0	**18%**
Small-medium cities	**32%**	4	16	36	5	1	**10%**
Countryside	**25%**	4	7	28	5	0	**11%**

(Source: from the questionnaire in this dissertation)

According to the descriptive statistics, the RED had worked better in the small-medium cities online cosmetics market in China nowadays. However, facing the raising challenge from competitors, the RED need to take approach toward

countryside Gen Zs to improve the current online cosmetics marketing share, whilst toward the megacities female Gen Zs to improve their recommendation on online cosmetics purchasing.

5.3 Assessment for EFA

As soon as the data package had been gathered and classified, several critical statistical consideration had been evaluated to guarantee the data appropriateness for factor analysis and MRA.

5.3.1 Assumptions related to factor analysis

To ensure the measured variables' properties, it had been proposed that the data reliability and unidimensionality should be examined (Fabrigar and Wegener, 2012, p.24). Following the principle, as discussed in Section 4.2.1 and 4.2.2, a set of statistical assumptions to test the data package had been arranged, including the Kaiser-Meyer-Olkin (KMO) measurement for sampling adequacy, Cronbach's alpha, as well as Barlett's test of sphericity.

5.3.1.1 Cronbach's alpha

Serving as most popular applied approach to evaluate the reliability coefficients, Cronbach's alpha was computed as the rate of reliable sum of squares divided by the total sum of squares or the total score variance, or the reliable variance (Thompson, 2004, p.12). The total general Cronbach's alpha was 0.943 in result, showing the 'Excellent' performance of reliability.

5.3.1.2 Sampling adequacy measured by Kaiser-Meyer-Olkin

The Kaiser-Meyer-Olkin (KMO) Index varies between 0 and 1.0. In the case that each variable was exactly presumed without any error caused by other variables, the KMO may reach 1.0 (Collis and Hussey, 2013, p.280). In the dissertation, the

evaluation output (shown on Table 4.2) had been figured out as 0.903. According to Kaiser and Rice (cited in Clemes, Gan and Zhang, 2014), the value should be 'adequate', which indicated that the variables belonged together and were appropriate for EFA.

5.3.1.3 Sphericity of Barlett's test

Sphericity of Bartlett's test had been evaluated for the purpose of verifying a form of compound sphericity or symmetry from a population of variables. The result of value (shown on Table 4.2) was high (2218.731) whilst the significance level was low (0.000). Thus, the variables of factors were correlated, and the factor analysis could be conducted (Collis and Hussey, 2013, p.280).

5.3.2 Results of factor analysis

The output from assumption statistic test proved the package of data were suitable for EFA. Thus, EFA was conducted by principal component factor analyzing approach on the total of variables identified in the previous review of the literature. The results had been summarized in the next section.

5.3.2.1 The criterion of latent roots

The outputs from the criterion of latent root / total variance explained of Independent influencing factors (shown on Table 4.5) revealed that all of the 25 variants applied for EFA could be extracted and grouped into four core indicators. The four core indicators could explain 67.749% of the total data variation.

5.3.2.2 The test of Scree

Figure 4.4 demonstrated the philosophy upon which by putting a direct dot-line (eigenvalue>1 in Kaiser Criterion principles) through the lower end of the roots; there appeared four factors before the curve became nearly one direct line. The fact illustrated the extraction of four core factors might be acceptable for the dissertation

based upon ‘eigenvalue greater than 1.0 rule’ (Thompson, 2004, p.32).

5.3.2.3 The rotation result and factor interpretation

Typically, the orthogonal rotation (e.g., VARIMAX) and the oblique rotation could be applied to account for the calculated factor matrix. In the dissertation, following the suggestion from schcolars like Thompson (2004, p.42) , Fabrigar and Wegener (2012, p.73), and taking the advantage of clearer structure concerning the content validity of the factors, the VARIMAX rotation had been applied.

As such, the factor loadings from the VARIMAX rotation defined the final factor structure.

Fabrigar and Wegener (2012, p.75) pointed out the ±0.05 could be used as a cut-off point due to the reason that ± 0.05 as the factor loadings could construct a solid frame and assist in raising the factor rotation’s robustness. Accordingly, in the research, the result (list in Table 4.6) indicated that the total of factors which had applied the varimax method hold loadings above ± 0.05 significantly.

Therefore, totally four core factor were subsequently grouped and re-named in line with the characters they represented, including 1) APP content and design, 2) UM, 3) OBT, and 4) online social shopping (removed due to the low variance %).

5.3.3 Multiple regression model with statistical assumptions

A series of tests in statistic had been employed to assure the fitness of data with the consideration of MRA, in two different directions of continuous and recommending purchasing intention.

5.3.3.1 The continuous purchasing intention as the dependent variable

As explained in 4.3.1, it was found that the Factor 2 (UM) showed most strong

positive influence to the Chinese female Gen Zs' online cosmetics continuous purchasing intention in RED with the result of β = 0.600 and p = 0.000, followed by the Factor 1 (APP content and design) with the result of β = 0.288 and p = 0.000, whilst little related with the Factor 3 (OBT, β = 0.070; p = 0.303).

5.3.3.2 The recommending purchasing intention as the dependent variable

Illustrated in 4.3.2, again, it was found that the Factor 2 (UM) showed most strong positive influence to the Chinese female Gen Zs' online cosmetics recommending purchasing intention in RED, with the result of β = 0.530 and p = 0.000, followed by the Factor 3 (OBT) with the result of β = 0.246 and p = 0.000, whilst little related with the Factor 2 (APP content and design, β = 0.079; p = 0.291).

5.4 Research objective one related result

Objective one was set to extract several major variables from numbers of potential influencing factors (stated in 1.3). The EFA approach had been conducted in this research, including techniques of PCA, with the detailed result shown on item 1~3 in Table 4.8.

Factor group 1: with 43.382% variance (43.382% > 5% in accuracy) and was re-named as 'APP content and design'. Detail ranked in Table 4.7 by the factor loading; this common factor was contributed mostly by measured factors of APP content related (e.g., UGC, attractive content, product information / variety / trend / brand shown in content, etc.), as well as APP design (e.g., APP web site design, how to present the personalized content to individual, to get better personal reviewing / shopping experience, etc.).

Factor group 2: with 15.095% variance (15.095% > 5% in accuracy) and was

re-named as ‘UM’. According to the ranking of factor loading shown in Table 4.7, four out of five UM factors had significantly contributed to this common factor (each one loading > 0.482), including shopping security / safety, shopping efficiency / convenience, as well as privacy protection during the shopping journey.

Some cost-related factors also raised, such as reasonable transaction cost, price bargain and cost-saving for Chinese female Gen Zs in cosmetics purchasing procedural in RED. According to MCVMA (2017), Tian (2018), and Wei *et al*. (2018), these cost-related factors should also be categorized into UM group.

Noticeable, the factor of ‘entertainment’ – which came from HM – was also among the ranking list with second high loading (0.86). Thompson (2004) proposed that when the common factor to be re-named, it must ‘*be named in the way that may reflect the total pattern of contribution from all sorts of variables to the factor's definition*’. Taking his proposal into account and considering the total loading ratio; still the second factor was named as ‘UM’.

Factor group 3: with 5.221% variance (5.221% > 5% in accuracy) and was re-named as ‘OBT’. Five out of six measured factors rooted in the OBT section, including RED related online brand ability / cognitive / competence, brand benevolence / affective and brand integrity. Additional one reflected the e-service quality, which should also be included in the OBT (Kim and Jones, 2009).

In general, three core factors had been effectively extracted to address the first research objective.

5.5 Research objective two related result

Objective two had been raised to define the major critical factors which significantly

influence female Gen Z's cosmetic online purchasing intention in China through the RED (stated in 1.3). Given that the online purchasing intention could be normed as the context to which a consumer performs preparation to commit a transaction online (Houda and Mohsen, 2012), it could be classified as self-instruction represented like 'continuous' purchasing (Chen & Wang, 2016), as well as willing to 'recommend' to others (Park, Lee & Han, 2007; Shahid, *et al*, 2018).

Therefore, the multiple regression analysis had been conducted, employing the three core factors as predictors / independent variables, and 'continuous' and 'recommending' purchasing intention as DV (dependent variable) separately.

5.5.1 Factors influencing continuous purchasing intention

The three core factors had been taken as the predictor whilst the continuous purchasing intention as the dependent variable in the multiple regression analysis. The result indicated in Table 4.9 yielded a 0.447 R square, which provides a 44.7% total variation of explanation. In addition, the F value of 32.102 was found to be significant at $p = 0.000$ ($p < 0.05$) during the ANOVA, showing that the module used was statistically significant.

Furthermore, a coefficients analysis shown in Table 4.11 had been conducted, during which the common Factor 2 of UM was ranked highest on the influence extent ($\beta = 0.600$; $p = 0.000$), followed by the Factor 1 of App content and design ($\beta = 0.288$; $p = 0.000$). The Factor 3 of OBT had been found to be of little influence ($\beta = 0.070$; $p = 0.303$).

5.5.2 Factors influencing recommending purchasing intention

To continue the research of objective three in another dimension, again the three

core factors had been taken as the predictor, while recommending purchasing intention as the dependent variable in MRA. The result listed in Table 4.12 produced a 0.348 R square, which provides a 34.8% total variation of explanation. Further, the F value of 21.142 was found to be significant at $p = 0.000$ ($p < 0.05$) during the ANOVA, showing that the module used was statistically significant.

In addition, a coefficients analysis shown in Table 4.14 had been conducted, indicating that again the common Factor 2 of UM was ranked highest on the influence extent ($\beta = 0.530$; $p = 0.000$), followed by the Factor 3 of OBT ($\beta = 0.246$; $p = 0.000$). Lastly, Factor 1 of APP content and design had been found to be of little influence ($\beta = 0.079$; $p = 0.291$).

5.6 Research objective three related result

The research objective three has set the target to propose references to the CBOS stations like the RED in terms of merchandising policy based on the analysis result. Firstly, based on result analyzed in 5.2., the demographical factor of the living region showed significant influence on different tpyes of Chinese female Gen Zs' online purchasing intention in RED.

To the best of the author's knowledge, so far few research had put focus in the impact of Gen Zs' living region towards the cosmetics consumption in RED. China had been regarded as a huge country with very different demographical characters in the different region (e.g., Beyari and Abareshi, 2016; Han and Kim, 2018), therefore it would make sense to study further on this topic.

Secondly, the common Factor 2 of UM had shown the strongest influence on both continuous and recommending online purchasing intention.

Thirdly, the common Factor 1 of APP content and design had been proved to influence the continuous purchasing intention positively.

Fourthly, the common Factor 3 of OBT was found to be strongly connected with the recommending purchasing intention.

In general, to improve the online cosmetics purchasing intention, RED should focus on UM motivation towards the female Gen Zs, whilst enriches APP content and design for repeat shopping / continuous consumption, also raise the OBT to improve the chance of recommendation to others.

5.7 Chapter Summary

The discussion chapter has formed some of the key results yielded from the previous chapters. The discussion section revealed that the research objective 1 to 3 had been well addressed, considering the critical common factors extracted, their relationship towards online purchasing intention, as well as the valuable rough proposals to improve Chinese female Gen Zs' purchasing intention in terms of cosmetics products.

6.0 CONCLUSIONS AND IMPLICATIONS

As the last chapter of the dissertation, it calls for the reflection to the research objectives, the contribution based on the finding, together with the limitation and recommendations for future research.

6.0 Introduction

In chapter six, the fitness from the findings of research towards the three research objectives has been illustrated. The conclusions had been made based on the analysis, followed by the implication from both theoretical and managerial perspective. Last but not least, the limitation of the research was clarified, and the dissertation was ended by the proposal to future research.

6.1 Research Objectives: findings and conclusions summary

The research objectives were threefold, which had been addressed and summarised below.

6.1.1 Research objective 1 related conclusions: to extract several major factors from several potential influencing factors.

An EFA with PCA approach had been conducted to satisfy objective 1, with the result of three common factors extracted from totally 25 items, including APP content and design, UM and OBT.

APP content and design was a re-named new factor in this research, presenting both content-related factors like affection / UGC / product brand / product variety / product information / trend, and the APP design-related factor. In this dissertation, it represented in RED, how the content of product brand / introduction / trend had been initiated, included, uploaded, maintained and updated following the Gen Z – oriented

website design.

UM, or utilitarian motives was taken from the UGT paradigm, presented several key factors of shopping security and privacy, shopping convenience, cost and saving (Chiu *et al.*, 2014). In this dissertation, it represented the utilitarian motivations evoking Chinese female Gen Zs cosmetics purchasing in RED.

OBT refers to *'the confident expectations of the brand's reliability and intentions in situations entailing risk to the consumer' on a specific website'* (Delgado-Ballester, Muneura-Aleman & Yague- Guillen,2003; Ha, 2004; Shah Alam & Mohd Yasin, 2010 cited in Lim, 2016). In this dissertation, it represented the extent to which the Chinese female Gen Zs trust the RED as a reliable brand of CBOS platform when purchasing cosmetics.

The extraction had been conducted following the required principles of EFA (Fabrigar and Wegener, 2012; Osborne, Jason and Erin, 2016; Thompson, 2004). Objective 1 had been satisfied.

6.1.2 Research objective 2 related conclusions: to define the major critical factors which significantly influence female Gen Z's cosmetic online purchasing intention in China through the RED

Based upon the result of three common factor extracted, a multiple regress analysis was conducted to test their relation with Chinese female Gen Zs' cosmetics purchasing intention.

The result indicated that Factor 2 of UM had brought the strongest influence to both continuous purchasing and recommending intention. The finding was consistent with previous literature. For example, Johar and Suharyono (2018) found the UM was significant towards repurchasing intention in Indonesia's online fashion industry.

MCVMA Morais (2017) illustrated the UM showed more substantial influence than HM in online cosmetics marketing in Portugal.

The finding also included that Factor 1 of APP content and design could positively influence the continuous purchasing / repeat purchasing intention. Namely, to regularly maintain and update the RED APP content with attractive design, may work to stimulate the Chinese female Gen Zs' continuous purchasing intention on cosmetics.

On the other hand, Factor 3 of OBT had been found to connect with the purchasing recommendation to others positively. The Chinese female Gen Zs were observed to tend to recommend others to purchase cosmetics in RED, under the condition that their OBT with RED are high.

In conclusion, all of the three common factors showed significant influence to Chinese female Gen Zs' online cosmetics purchasing intention, whilst APP content and design more specified on continuous and OBT on recommendations.

6.1.3 Research objective 3 related conclusions: to propose references to the CBOS stations like the RED in terms of merchandising policy based on the analysis result

Based on the demographic difference analysis shown in Table 5.1 and 5.2, RED should take actions to improve the continuous cosmetics purchasing intention targeting at female Gen Zs living at megacities and countryside. Potential actions should be related with UM evoking as well as the APP content and design.

On the other hand, if RED wish to improve the purchasing recommendation, the approach associated with the OBT should be taken into account, e.g., to improve the eWOM (Bhandari and Rodgers, 2018; Soni and Verghese, 2018), show the integrity

(Hsu, 2019; Kashif Javed, Ma and Qadeer, 2019) by posting the related policy on the APP website.

Furthermore, in the finding from the dissertation, to purchase the cosmetics in RED were stimulated more by the UM rather than HM, fro the Chinese female Gen Zs. Therefore, rather than socializing shopping, RED should focus more on providing reasonable price / transaction cost, well-pretecting consumers' privacy, as well as demonstrating product-related information as detail as possible.

6.2 Theoretical implication

The findings yielded from the research provided several contributions to give a clearer vision to understand Chinese female Gen Zs' online cosmetics purchasing intention.

Firstly, this dissertation enriches the limited current empirical studies in terms of Gen Zs' adoption of online consumption, particularly in China's online cosmetics industry. The research result of the common factors developed from the study, which positively connected with the Chinese female Gen Zs' purchasing intention, had provided a valuable resource for future researchers on China's e-commerce cosmetics industry.

Secondly, although in previous, some scholars already identified several critical factors which have been taken by young Chinese generations for their online shopping intention consideration, this dissertation had deeply investigated these factors by 1) extracting several common factors; 2) evaluate the influence on different types of their purchasing intention from the extracted factors. The empirical developing ways in this research had illustrated how important to apply empirical

research (questionnaire, EFA, multiple regression analysis, etc.) in terms of online customers' shopping behaviour.

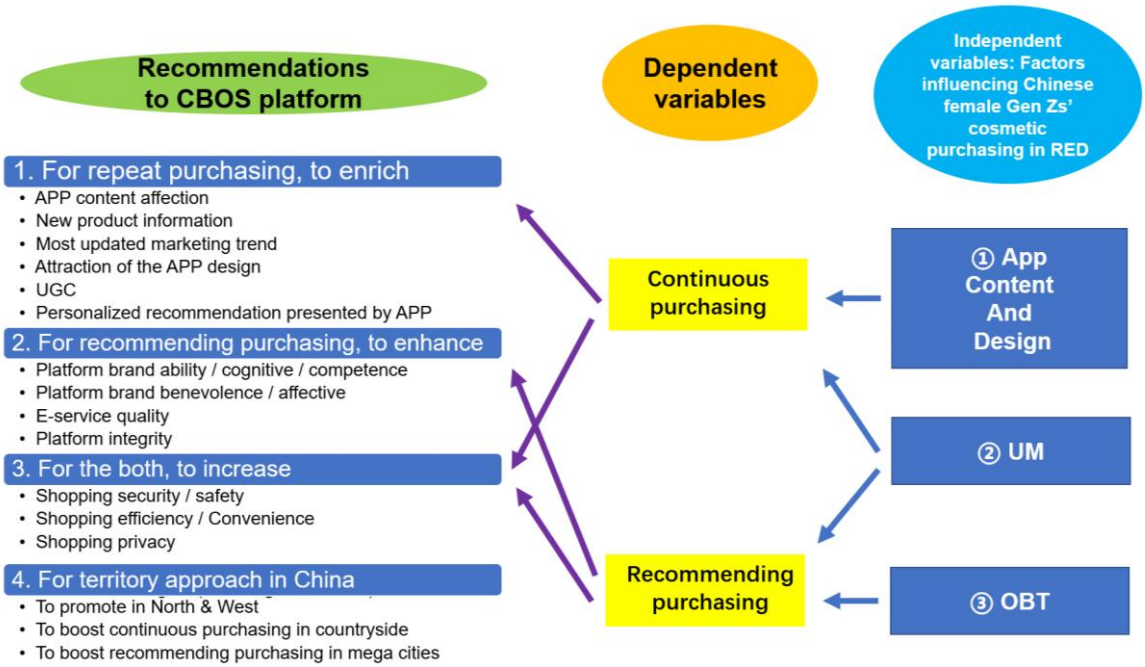
Thirdly, the study confirmed that the Chinese female Gen Zs' online cosmetics purchasing behaviour was complicated and their purchasing intention should be seen as a combination across different demensions, e.g., UM, HM, OBT, CBOS, etc. Previous studies had mainly focused more on one / some part of the demensions; however, this dissertation showed the necessity to take a more comprehensive approach on consumers' behaviour study.

6.3 Managerial implication

The dissertation had provided numbers of in-depth insights towards the connection between the influencing factors and Chinese female Gen Zs' online cosmetics purchasing intention in RED. These insights may serve to assist CBOS platforms / online cosmetics retailers to understand their (potential) consumers' purchasing decision making motivation better, and accordingly modify suitable marketing strategy, conduct necessary improvements / promotions, and decide proper marketing directions (Muhammad, *et al.*, 2018).

The finding of the dissertation identified three critical common factors which showed a positive influence on Chinese female Gen Zs' online cosmetics purchasing intention, including APP content and design, UM, and OBT (Shown on Figure 6.1).

Figure 6.1: Managerial implication for China CBOS platform



In light of the weight of factor loading in Table 4.7, the priority of managerial implication could be listed as below (from High to low):

- Protection to shopping security / privacy
- Shopping effeiciency / convenience
- App content enrichment
- App design attractiveness improvement
- Online brand trust promotion

Firstly, the dissertation revealed that UM related factors hold the most substantial influence on the Chinese female Gen Zs' online cosmetics purchasing intention in RED. Previous scholars had found that UM was a critical consideration for consumers during online shopping (Johar and Suharyono, 2018; VARADARAJ and CHARUMATHI, 2019).

Furthermore, Gan and Li (2018) found that UM had played an important role in social media usage like WeChat, which was the foundation of e-commerce. The finding was

consistent with the previous literature.

This dissertation also indicated that Chinese female Gen Zs's UM motivation was mainly related with the following factors, ranking from high to low by the loading: shopping security privacy / safety, shopping effeiciency / convenience, privacy protection, price bargain / cost saving including transaction cost. As such, e-marketers and e-retailers should develop various risk-reducing strategies.

The security of online shopping and individual's privacy protection should be emphasized by the e-retailers. Therefore, CBOS platform like RED should invest more to improve the shopping safety, privacy and shopping convenience, lower the cost of transportation, and present more price-attractive brand on the platform.

Secondly, in term of OBT, it was found to positively influence the Chinese female Gen Zs' recommending purchasing intention towards cosmetics products. RED needs to improve consumers' OBT to exceed the young generation's expectation. In the research, it was illustrated how this multidimensional factor (Kim, Kim and Lee, 2019) could be broken down into small ones in loading ranking list, including Ability / cognitive / competence, benevolence / affective, e-service quality and Integrity.

For example, as proposed by Becerra and Korgaonkar (2011), RED could post heir privacy policies, online shopping security insurance system on the APP, to ensure RED leave reputable brand image within the Chinese young female generation. Alternatively, RED could also reveal the story / user review of how they help their users to solve the service problems online (Alam and Yasin, 2010), to boost the construct a solid OBT foundation to boost the sales.

Thirdly, APP content and design was a newly named factor, which was found to

significantly influence the Chinese female Gen Zs' continuous purchasing intention. In particular, it would be divided into product brand / variety / review / new trend related information feasibility, as well as APP website design to provide specified personalized experience.

Inspired by Imschloss and Lorenz (2018), and Kleddao (2017), APP of RED should be well designed, e.g., to adopt the colorful graphic, to encourage the repeat purchasing. At the mean while, to regular maintain and update the APP content to ensure they are always reflecting the new trend / technology / version should be also critical for RED in terms of the cosmetics commodity.

Lastly, the research found that in West and North China, the participating ratio was very low. If the CBOS platform wants to increase the marketing share, they should not ignore these consumer needs. Also, they should boost the repeat purchasing in the countryside, and recommending purchasing in megacities, from territory point of view.

6.4 Limitations and future research

Even though the author had tried his best to provide the exciting and reasonable insight on the major factors that were strongly influencing Chinese female Gen Zs' online cosmetics purchasing intention, still due to the limited resource of time, manpower and financial budget, there were several limitations associated with the research.

Firstly, the size of the samples. Generally, larger samples should be better than smaller ones due to the reason that larger samples tend to maximize the accuracy of population estimates, minimize the probability of errors, therefore increase the

results' generalizability (Osborne and Erin, 2016).

Although 123 effective responses could be regarded as a qualified range (Fabrigar and Wegener, 2012, p.26), still the larger sample size may increase the result accusation (of course, the variety of properties of the data and model fit should also be considered).

Secondly, the demographic character of the samples. 50% of the respondents were living at the small-medium cities, leaving the gap to take into account more on those consumers came from megacities and countryside in China.

Thirdly, the measured variables. In addition to the 25 questionnaires initiated in the research, there may exist other factors that would affect Chinese female Gen Zs' online cosmetics purchasing intention in RED. Thus future research should also take other factors into consideration, for instance, the marketing 4Ps, etc.

Fourthly, this dissertation only focuses on the CBOS platform of RED. Actually, in China there exist other CBOS platforms like Taobao, WeChat (Jiang & Kungel, 2017), Yangmatou, Netease's Koala, Tmall Global, AliExpress, etc. (Xiao, *et al*, 2019).

Following on these limitations, future studies should consider to 1). Adopt a larger sample size, specifically respondents living at megacities and countryside; 2). enrich the pool of potential variables; 3). compare the influence to different CBOS platforms; 4). compare the different influence to different gender and generation from same / different region / countries; and 5). add other commodities besides cosmetics into the analysis scale.

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Appendix

APPENDIX A: Participant Information Sheet

1. **Title of Study: A study of factors influencing online cosmetics purchase intention in China's female Gen Z based on the RED**

2. **Version 1, 20st February 2020**

3. **Invitation to participate in a research study**

   You are being invited to participate in a research study. Before you decide whether to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and feel free to ask us if you would like more information or if there is anything that you do not understand. Please also feel free to discuss this with your friends, relatives and family doctor if you wish. We would like to stress that you do not have to accept this invitation and should only agree to take part if you want to.

   Thank you for reading this

4. **What is the purpose of the study?**

   This research is aimed at studying the practices of the social media in China: What kind of factors influencing online purchase intention to China's Gen Z when they are purchasing cosmetic products on the RED? The objective of this study is to explore: 1) To determine the factors that influence Gen Z's cosmetic online purchasing in China through the RED and 2) To examine the moderating function of brand awareness, brand loyalty and brand trust between the influencing factors and the online purchasing intention. The findings from the study will be used to allow better insight into experiences of work in the field, particularly in identifying the essential factors influencing China's Gen Z's online purchase intention when they purchase cosmetic goods at the e-shopping platforms like RED.

5. **Why have I been chosen to take part?**

   This research targets the Chinese female Gen Z, who had the cosmetical products shopping experience in RED. If you are candidates meeting with the standards including 1) With China nationality; 2) Female; 3) Born between 1997 and 2002; 4) Holds cosmetic shopping experience in RED, you are welcome to participate.

6. Do I have to take part?

No. Your participation is entirely voluntary. You can choose whether or not to take part. Even if you choose to take part, you can change your mind, and you are free to withdraw at any time without giving any explanation. There will be no negative impact or disadvantage to you if you choose not to take part, nor if you change your mind and choose to withdraw.

7. What will happen if I take part?

If you choose to take part in the study, then you will be interviewed once by the researcher, who is a University of Liverpool Master's student called Jianhui ZENG. You will be asked no more than 30 closed-ended questions by the researcher. The questions will be about your experiences of online shopping in the RED related to the cosmetic products. This should take about 10-15 minutes of your time. The result will be digitally recorded and saved in the web-server of Qualtrics. When the survey completed, the results will be download from to the researcher's computer. The responses that participants have given will be analysed by the researcher to find out more about what it is like to work in these kinds of situations. All personal information will be removed from the transcript and you will not be identified. Nobody will know that you have taken part, and your anonymity is assured.

8. How will my data be used?

The University of Liverpool processes personal data as part of its research and teaching activities in accordance with the lawful basis of 'public task', and in accordance with the University's purpose of "advancing education, learning and research for the public benefit".

Under UK data protection legislation, the University acts as the Data Controller for personal data collected as part of the University's research. The Dissertation Advisor, Dr Darrell Kofkin, acts as the Data Processor for this study, and any queries relating to the handling of your personal data can be sent to Dr Darrell Kofkin at darrell.kofkin@online.liverpool.ac.uk .

Further information on how your data will be used can be found in the table below.

How will my data be collected?	An online survey including no more than 30 questionnaires.
How will my data be stored?	The original result will be password-protected stored on the server of Qualtrics. For the research purpose, all of the results will be download to the researcher's personal computer and saved in a

	password-protected file.
How long will my data be stored for?	Once the transcript has been completed, the original audio recording will be deleted. Anonymised transcript will be kept until the Master's dissertation module has been completed by the student and the grade approved by the University.
What measures are in place to protect the security and confidentiality of my data?	All electronic files kept on a secure, password-protected network storage drive, and no data-related paper documents will be generated during the research process.
Will my data be anonymised?	Yes, the transcript will be fully anonymised and labelled only as 'Participant A, Participant B' etc.
How will my data be used?	It will be analysed along with all of the other interview data collected from other participants, for the purposes of a Master's student dissertation.
Who will have access to my data?	Student researcher and Dissertation Advisor
Will my data be archived for use in other research projects in the future?	No
How will my data be destroyed?	Electronic files will be deleted. No data-related paper documents will be generated during the research process.

9. Expenses and / or payments

There will be no payments made for taking part in the study. You will not incur any expenses.

10. Are there any risks in taking part?

You will not be exposed to any risks, hazards or adverse effects as a result of your participation in this study. However, in the unlikely event that you experience any discomfort or disadvantage as part of the research, please make this known to the researcher straight away.

11. Are there any benefits in taking part?

There are no immediate benefits in taking part in this study. However, there

are potential benefits that may arise from the results of the project. For example, it may lead to improved shopping skill and reflection to your own online shopping experience, as well as the extended insight to consumers' online shopping motivation on RED.

12. What will happen to the results of the study?

Results of the study will be written up by the student researcher as a Master's dissertation, which will eventually be lodged in the University of Liverpool library. The results of the study will also be summarised in a short document that will be sent to all participants for information only. You will not be identifiable from the results.

13. What will happen if I want to stop taking part?

You can change your mind at any time and stop participating in the study. You do not have to give any reason. Simply close the online survey during the process or contact the student researcher and let them know. If you withdraw from the study after the survey has taken place, you can ask for your survey to be destroyed. Once survey has taken place, your survey will be anonymised and it will not be possible to identify it in order to destroy it.

14. What if I am unhappy or if there is a problem?

If you are unhappy, or if there is a problem, please feel free to let us know by contacting the Dissertation Advisor, Darrell Kofkin at darrell.kofkin@online.liverpool.ac.uk and we will try to help. If you remain unhappy or have a complaint which you feel you cannot come to us with then you should contact the University's Research Ethics and Integrity Office at ethics@liv.ac.uk. When contacting the Research Ethics and Integrity Office, please provide details of the name or description of the study (so that it can be identified), the researcher(s) involved, and the details of the complaint you wish to make.

The University strives to maintain the highest standards of rigour in the processing of your data. However, if you have any concerns about the way in which the University processes your personal data, it is important that you are aware of your right to lodge a complaint with the Information Commissioner's Office by calling (+44) 0303 123 1113.

15. Whom can I contact if I have further questions?

You should contact the Dissertation Advisor for the study, Dr Darrell Kofkin, at darrell.kofkin@online.liverpool.ac.uk

The student researcher is Jianhui ZENG, who can be contacted at jianhui.zeng@online.liverpool.ac.uk

APPENDIX B: Questionnaires

SECTION ONE

Please TICK the most appropriate box for following questions.

1 Are your female or Male?
□ Male □ Female

2 Downtown or countryside, which are you from?
□ Mega cities □ Small-medium cities □ Countryside

3 What is your age range?
□ 18~26 □ 27~31 □ Over 32

SECTION TWO

This section is about your thoughts regarding the adoption of Cosmetics Online Shopping in RED. Please CIRCLE how strongly you agree or disagree with each of the following statements on a scale of 1 to 5.
1-you strongly disagree, 5-you strongly agree, 3-neutral.

	Strongly Disagree		Neutral	Strongly Agree	
4 I will continue buy cosmetic in the RED.	1	2	3	4	5
5 I will recommend others to buy cosmetic from the RED.	1	2	3	4	5
6 I can learn rich product information in the RED.	1	2	3	4	5
7 I can always get the cheapest cosmetical goods in the RED.	1	2	3	4	5
8 To buy the cosmetical goods in RED is of high efficient.	1	2	3	4	5
9 To buy the cosmetical goods in RED is safe.	1	2	3	4	5
10 I don't worry to reveal my privacy when buy the cosmetical goods in the RED.	1	2	3	4	5
11 I enjoy the cosmetical shopping in the RED.	1	2	3	4	5
12 I can always keep myself connected with others from the RED.	1	2	3	4	5
13 I enjoy the cosmetical price bargain in RED.	1	2	3	4	5
14 I can always learn the most updated / new product in RED.	1	2	3	4	5
15 The content in RED are very attractive.	1	2	3	4	5
16 The RED deliver consistent service.	1	2	3	4	5
17 The RED approaches their users with professionalism and dedicaiton.	1	2	3	4	5
18 The RED has good intentions toward consumers.	1	2	3	4	5
19 The RED respons constructively when I have a service problem.	1	2	3	4	5
20 The RED is an honest brand.	1	2	3	4	5
21 The RED provides excellent personalized recommendation on cosmetic products.	1	2	3	4	5
22 The RED provides out-standing service.	1	2	3	4	5
23 The transaction fee of cosmetic product in the RED is reasonable.	1	2	3	4	5
24 I enjoy reading the user-generated cosmetical content in the RED.	1	2	3	4	5
25 I used to make reviews, product recommendation and visual portraying of the product in the RED.	1	2	3	4	5
26 To compare with other platfrom, the reputation of the RED is high.	1	2	3	4	5
27 I could find rich cosmetics product in the RED.	1	2	3	4	5
28 I can find more oversea brands cosmetics in the RED.	1	2	3	4	5
29 I am happy with the APP website design of the RED.	1	2	3	4	5
30 I can get special personal experience by shopping the cosmetics in RED.	1	2	3	4	5